Programming & Operations Guide

Release 3.5

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REVISION HISTORY

Release	Date	Documentation Changes	Page No.
3.5	06-10	Call Screening - MB owner can listen to msg while being left in mailbox.	1-38
		The following VM related features and enhancements were added:	--
		Administrator Mailbox - allows user to perform Admin MB functions.	C-1
		Announce Only Mailbox - specify caller action, no msgs taken.	C-4
		E-mail Notification of VM Msgs - sends e-mail when VM msg is rec'd.	C-11
		Message Cascading - allows duplicate msgs in multiple mailboxes.	C-18
		Outcall Notification - set parameters to notify when call is received.	C-22
		Virtual Mailboxes - allows stations to function w/o physical hardware.	C-25
		Voice Mailbox COS - set different MB parameters by class of service.	C-30
3.0	11-09	A CO Line Preset Forward feature was added to allow a call to ring at multiple stations (PGM 141, Flex 13-15).	1-43
		Station Call Coverage now supports Hunt Group pilot numbers.	1-80
		Flex button 4 has been added to the CCR table in PGM 228 to play a designated VM announcement to callers when the destination is busy.	1-123
		New CCR destination type has been added to PGM 228 to prompt an Attendant to record a system greeting (locally or remote).	1-124
		Use of Vertical DECT digital cordless phones is supported.	1-149
		Setup and Line parameters have been added to support the T1 board.	1-226
2.1	12-08	This reformatted *SBX IP Programming & Operations Guide* consolidates features, programming, and operations into 1 book. -> Sections include: 1) Basic Features, A) Networking, B) VoIP, C) Voicemail, D) Quick Ref, and E) Quick Start. -> No 2.0 system features have been added or removed.	See Table of Contents
2.0	07-08	A "Quick Start Topics" appendix has been added.	E-1
		Use of Vertical Ranger digital cordless phones is supported	1-149
		A Company Directory feature has been added to PGM 110: FLEX 3 & 4 for first/last names. A 6* station programming code is added to record the VMIB Subscriber Name. Also, a new CCR dial digit (12) was added, which represents a Company Directory request.	1-44 1-124

REVISION HISTORY

Release	Date	Documentation Changes	Page No.
2.0 (cont)	07-08	A new CCR dial digit has been added to PGM 228 to indicate a Mailbox Owner button. Also, 3 new destinations have been added: Busy, No Answer, and Time Out/Error.	1-124 & 1-123
		PGM 141 - FLEX 11 has been added to enable/disable the marking of a CO line(s) for 911 use.	1-5
		Daylight Saving Time feature has been added (PGM 178 -FLEX 3-5).	1-234
		DND Forward feature has been added (PGM 113 - FLEX 19).	1-50
		911 feature is added.	1-5
		The Weekly Time Table (PGM 233) has been modified to add Lunch Start and End Times.	1-14
		Pre-selected Message DND feature was added (PGM 113 - FLEX 16) .	1-51
		DID Call Routing and Incoming CLI feature has been added (PGM 237).	1-129
		DID/DISA DND/Pre-selected Message Destination feature has been added to PGM 167. - This feature replaces PGM 167 -FLEX 4 features of Busy Prompt Usage, Error Prompt Usage, DND Prompt Usage, No Answer Prompt Usage, and Attendant Transfer Prompt Usage and moves them to PGM 167 - FLEX 5. - This move displaces Reroute Busy Destination, Reroute Error Destination, and Reroute No Answer Destination from FLEX 5-7 to FLEX 6-8.	1-122
		PGM 143 - FLEX 14-18 have been added: - Screening	1-223
		- Double CLI Service/Calling Party Number Service	1-145
		- Deny Incoming Call	1-224
		- ICLID Usage	1-130
		Transit-Out Security feature is added.	A-19
		PGM 324 - FLEX 9-11 have been added: Net Firewall Routing, Authorization Code COS Use, and SMDR Dial Hidden.	A-25
1.0	01-08	Initial Release NOTES --1) Manual contains information on ISDN, DCOB, and SMS features that are not currently supported. 2) Information about DID pertains only to SIP Trunking.	--

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Basic System Features

General Information

Reference Material

A variety of documents support the SBX IP system. All SBX documents are on a single CD that ships with each system. These files are available in PDF format and can also be downloaded from the Vertical website at: http://Vconnect.vertical.com.

System Documentation

Release 1.0 and 2.0

SBX IP Installation Guide - detailed information for hardware installation

SBX IP Features & Operation Guide - description & operating instructions for features

SBX IP Programming Guide - system programming information

Release 3.0 or higher

SBX IP Installation Guide

SBX IP Prog & Opns Guide - replaces Feature/Description Guide & Programming Guide

End User Documents

SBX IP Phone User Guide

SBX 8-button Phone QRC

SBX 24-button Phone QRC

SBX Voice Mail In-skin QRC

Associated Windows-based Applications

PC Admin - the primary tool for programming and administering SBX IP systems

PC Admin Offline Editor - offline version database editing tool

Speed Editor - a tool for managing system speed dials

ez Phone - a CTI application for SBX phone users

Nomad SP Soft Phone - PC-version of the IP remote phone

About This Guide

This manual is designed to provide information regarding SBX IP 320 general system feature operation. In most cases, each feature described will contain three sections in the following order:

- CONDITIONS: explains any requirements or constraints of the feature related to its configuration.
- ADMIN PROGRAMMING: provides information about configuring the feature using a digital phone.
- OPERATION / SETUP: describes how to use and/or set up the feature using a digital phone.

Programming Guidelines

The SBX IP System can be programmed to meet each customer's individual needs. The elements of Basic Admin *Pre-programming* are covered in the *SBX IP Installation Guide,* and can help to ensure you are prepared for Admin Programming of your SBX IP System.

Pre-Programming (Installation)

Pre-programming for the following should have been done immediately following Installation of the SBX IP System. For details, refer to Chapter 6 "Starting the SBX IP" in the *SBX IP Installation Guide*.

Feature	PGM Code	Install Guide (page #)	
Default System (Reset)	450	6-5	*If you have the 3.0 Install Guide "open", you can use the blue hyperlinks to "jump" to these locations ...*
Site Name	100	6-6	
Board Assignment	101	6-8	
Numbering Plan Type	104	6-10	
System IP Settings	108	6-14	

PC Admin Programming

You must use the PC Admin application to set the following IP parameters which are located in the VoIP appendix:

PGM 386 - IP Phone Attributes (MAC address) … see page B-13

PGM 500 - SIP Attributes I … see page B-15

PGM 501 - SIP Attributes II … see page B-16

Programming Using the Keyset

All programming is done at one station (Station 100, Station Port #00, by default) using the 4024-00 Digital Key Telephone (DKT).

Additional programming stations may be assigned, but only one DKT can be active in the programming mode at any one time.

Admin (DKTU only) -- if value is set to ON, the assigned station users can program the Admin Database.	PGM 113 + FLEX 1 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable (default) 1 = Enable (Default = Enable for Admin Station at station port 1 only)

Programming Mode -- when in programming mode, Station 100 does not operate as a normal telephone, but instead works as a programming instrument with all of the buttons redefined. The keys of the dial pad are used to enter the various data fields to enter numerical information.

Flexible Buttons -- the 24 buttons located on the right side of the phone are used to indicate a specific data field and to enter information.

Soft Buttons -- the 3 functional soft buttons are used to go BACK to a previous menu, to DELETE data, or to SAVE data input.

Entering Programming Mode

To assign an Admin Password:

Admin Password -- an Admin password can be assigned for entering Admin Programming mode, as a security measure. To delete the Admin password, press the [SPEED] button.	PGM 162 + Password (4 digits - *, #, 0-9) + [HOLD/SAVE]	VALUES -- Default = not assigned # = ignore received digit * = bypass the digit

To enter programming mode:

1. Lift the Handset or press the speaker button on the Admin station.
2. Press the [TRANS/PGM] button and dial * #.
   A confirmation tone will sound.
3. Enter the Admin password, if a password has been set; a confirmation tone sounds indicating that the Station is in Admin Programming mode.

By default, there is no password.

```
ADMIN PROGRAM START

BACK        DELETE        SAVE
```

4. Each program is accessed by pressing the [TRANS/PGM] button The following will initially display:

```
ENTER PGM NUMBER

BACK        DELETE        SAVE
```

5. Dial the desired three-digit program number. If an error is made while entering data, the [TRANS/PGM] button will return to the previous status.

NOTE: To return to the previous state while in Admin Programming, press the [BACK] soft button to clear the temporary data fields.

Entering Ranges for Stations, COs, & Groups

The following Table is frequently used in Admin Programming procedures. When entering each range, refer to the table, as the range is not always mentioned in the procedures. When entering a programming area that involves stations or CO lines, you are prompted to enter the range of stations or CO lines that you want to modify. To modify a single station or CO line, enter the same number twice, e.g., 100100 = Sta 100 only, 01-01 CO line 1 only.

STATION RANGE	CO RANGE	CO LINE GROUP RANGE
100-131	01-12	01-24

Saving System Changes

To accept changes while programming:

1. Press the [HOLD/SAVE] button when all changes have been entered to store the data permanently.
2. A confirmation tone sounds when pressing the [HOLD/SAVE] button, if all data was entered correctly. If there were any errors in the entering of data, an error tone will be presented and data will not be stored in the permanent memory.

Resetting the System

To reset the System:

Enter [PGM] + 450 then [FLEX] + 15 and press the [HOLD/SAVE] button.

911 Feature

The 911 feature was designed to give users one-button access to this emergency number. Any phone can be programmed with a Flex button designated specifically for 911 calls. When using this button, and all lines are busy, an active call is dropped so the 911 call can be placed.

IMPORTANT: A 911 button can be configured so that an access code (such as 9) is not required before the 911 is dialed.

Also, any station user who programs a flex button for 911 ALERT will be notified whenever an internal station places a 911 call. The system can store the last sixteen 911 calls placed, as well as associated call information (e.g., time/date of call, and station no. where call was placed).

The initial 911 Alert indications include:

- Audible ringing tone
- Green flashing 911 ALERT flex button LED
- Automatic LCD display of 911 call information

CONDITIONS

- Based on the trunk access code assigned by the System Administrator, a station user can place an emergency call in one of two ways:
  - if the trunk access code is 9 by default, a station must dial 9 + 911.
  - if the trunk access code is other than 9, a station can dial 911.
- If all trunks are busy, the system will drop an in-progress trunk, wait 1.5 seconds, and then dial the 911 call.

ADMIN PROGRAMMING

E911 Usage -- if value is set to ON, the designated CO Line is active for E911 use.	PGM 141 + FLEX 11 + (Value)	VALUES -- 0 = Off 1 = On Default: CO Line 01 is set to ON; all other CO Lines are set to OFF.

OPERATION / SETUP

To place an emergency call:

Dial 9 + 911, or, 911 (see CONDITIONS).

To assign a 911 feature button for Alert:

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Press [TRANS/PGM], then enter 7#; press [HOLD/SAVE] to store the setting.

Attendant Service

An Attendant can be configured to control the incoming calls by answering and transferring calls, etc. There are two types of Attendants available for configuration within the system. One Attendant can change simple settings of the whole system; the other provides programming for intercom tenancy groups (LCD date/time format, etc.):

Main Attendant -- a maximum of five stations can be defined as Main Attendants. These Attendants control and effect the whole system. The "first" main Attendant is called the "System" Attendant.

System Attendant -- the System Attendant differs from the Main Attendant in regard to call handling and system management priority. The System Attendant has more priority than the Main Attendant(s); the System Attendant default is: Station 100.

NOTE: The System Attendant can be changed, but it cannot be removed. *To change the System Attendant*, enter PGM 164 + FLEX 1 + Sta No. + [HOLD/SAVE].

Intercom Tenancy Group Attendant -- each intercom tenancy group can have its own Attendant. The Intercom Tenancy Group Attendant controls stations belonging to a specific intercom tenancy group. Intercom Tenancy Group Attendants affect only the intercom tenancy group to which they belong.

NOTE: Generally, the Attendant of a station is the Intercom Tenancy Group Attendant to which the station belongs. However, if an Intercom Tenancy Group Attendant of a station doesn't exist, the Main Attendant will provide the station with Atd services.

Assigning an Attendant

CONDITIONS

- An IP phone cannot be assigned as an Attendant.

ADMIN PROGRAMMING

Assign a Main Attendant

Main Attendants Assignment -- Main Attendants generally serve as call handlers. NOTE: To delete a Main Attendant, press the FLEX button, and select Attendant to delete; then press [SPEED] button.	PGM 164 + FLEX 2 + Sta No. + [HOLD/SAVE]	VALUES -- Default = *not assigned* Range = FLEX 2- 5

Assign an Intercom Tenancy Group Attendant

ICM Tenancy Group Attendant Assign -- each Intercom Tenancy group may have one attendant. Day / Night Mode for Intercom Tenancy Groups is set by the Intercom Tenancy Group Attendant.	PGM 120 + FLEX 1 + ICM Tenancy Group Atd (Attendant) + [HOLD/SAVE]	VALUES -- Sta No.

Attendant Call & Queuing

CONDITIONS

- If an Attendant calls another busy Attendant, the calling Attendant will hear a busy tone, and can then Camp-On to the called (but busy) Attendant.
- If an Attendant activates unconditional Call Forward, the calls to that Attendant will follow the configured call forward process.
- If a user dials 0 (zero), it will ring the Assigned Attendant station of the intercom tenancy group to which the station belongs. If there is no station configured as an Assigned Attendant, the call will ring the Main Attendant station.
- Call to any Attendant will be queued, if the Attendant is busy. Then, ring-back tone or MOH will be provided to the calling party (see page 1-74).

ADMIN PROGRAMMING

Assign a Main Attendant

Use PGM 164 … *see* page 1-6

Set the MOH Type

Use PGM 171 + FLEX 2 … *see* page 1-74

Assign the Intercom Group Attendant

Use PGM 120 + FLEX 1 … see page 1-6

Set Attendant Call Queuing (Ring Back Tone/Music On Hold) RBT/MOH

Attendant Call Queuing Ring Back Tone -- if value is set to RBT, ring back tone is provided to the Station when the Station calls a busy Attendant; otherwise, the hold tone or VMIB-MOH is provided (PGM 171 - FLEX 2).	PGM 160 + FLEX 1 + 0 (MOH) + [HOLD/SAVE]	VALUES -- 0 = MOH 1 = RBT

OPERATION / SETUP

To call an Attendant:

1. Go off-hook.
2. Press 0 (zero).
   -or-
   Dial the station number of the Attendant.

Attendant Forward

The Attendant can forward (Unconditional Call Forward) a call to another station. The Forwarded-to station will temporarily substitute for the Attendant while the Attendant is in the forwarded state.

CONDITIONS

- If the Attendant assigns Unconditional Call Forward to a Single Line Telephone (SLT) or Wireless Handset Telephone Unit (WHTU), the Forwarded-to station only serves incoming calls as an Attendant call or Attendant recall.
- Attendant features cannot be activated when forward is set to an SLT or WHTU.

OPERATION / SETUP

To activate Attendant Forward:

1. Go off-hook.
2. Press [DND/FWD].
3. Press 1 (for Unconditional Call Forward).
4. Dial the station number.
5. Hang up the handset.

To deactivate Attendant Forward:

In an idle state, press [DND/FWD].

-or-

In an off-hook state, press [DND/FWD], then #.

Attendant Intrusion

When an Attendant has an urgent message for a station already on a call on a CO line, the Attendant can break-into the call to deliver the message to the designated station and the distant party.

IMPORTANT: An ATD INTRUSION flex button must be programmed before this operation can be performed. See "Flex Buttons" on page 1-53.

CONDITIONS

- To use this feature, the Auto Privacy should be set to OFF, and Override Privilege of the Attendant should be ENABLED - see ADMIN PROGRAMMING.
- Also see "Emergency Intrusion" on page 1-50 and "Forced Trunk Disconnect" on page 1-57.

ADMIN PROGRAMMING

Set Auto Privacy

PGM 161 + FLEX 5 … see page 1-34.

Set Privacy Warning Tone

PGM 161 + FLEX 6 … see page 1-34.

Set Override Privilege

PGM 113 + FLEX 4 … see page 1-34.

OPERATION / SETUP

To intrude on a CO call:

1. At the busy tone, press the programmed {ATD INTRUSION} button.
2. After the intrusion tone, converse with the station and/or the CO party.

To assign an {ATD INTRUSION} Flex button:

1. Press [TRANS/PGM], then press the Flex button to be assigned
2. Press [TRANS/PGM], then enter 86.
3. Press [HOLD/SAVE] to store the setting.

Attendant Override

A station in Do Not Disturb (DND) mode generally cannot receive incoming calls - see "Attendant Intrusion" on page 1-8 and "Barge In" on page 1-34.

The Attendant, however, can temporarily invalidate a station's DND mode in order to call (and transfer calls) to that station. In addition, the Camp-On feature can be used to override DND.

CONDITIONS

- The Attendant can only override a station's DND mode (to transfer a CO call) if the station has a CO or LOOP button (refer to the SBX IP 320 Programming Manual for more information about CO and LOOP buttons.
- If target station has no CO or CO button, CO call will be recalled to Attendant immediately.

OPERATION / SETUP

To override a DND state at a station:

When a DND tone is heard, press *, or the last digit of the dialed station number.

-or-

Press the programmed Camp-On Flex button. (See "Camp-on" on page 1-38.)

The DND warning tone will be changed to the Intercom ring-back tone at the Attendant Station. The Attendant can then call a station in the DND state.

To assign the {Camp-On} Flex button:

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Press [TRANS/PGM], then enter 85; press [HOLD/SAVE] to store the setting.

Attendant Recall

If the recalled CO call (in the transfer or hold state) is unanswered by the destination station, the CO call will be directed to the Attendant. The Attendant will receive the Recall ring as per the setting of the Attendant Recall Timer.

CONDITIONS

- If the Attendant doesn't answer the CO call for a time equal to the Attendant Recall Timer, the CO call will be disconnected.
- If an Attendant for an Intercom Tenancy Group is not assigned, the CO call is recalled to the System Attendant.
- When a call in Exclusive Hold is recalled to the Attendant, the call is placed on System Hold. (See "Hold" on page 1-184.)
- A Private CO line will not be recalled to the Attendant.

ADMIN PROGRAMMING

Set Attendant Recall Timer

Attendant Recall Timer -- if a recalled call arrives at the Attendant station, and the Attendant does not answer within the designated time, the system will disconnect the call.	PGM 180 + FLEX 1 + 01 (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-60 minutes

Set Hold Recall Timer

I-Hold Recall Timer -- when a recalled call is not answered, it will recall to the Attendant after the designated time expires.	PGM 180 + FLEX 5 + 030 (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-300 seconds

LCD Date/Time Display

The Attendant can change the LCD Date/Time display format for stations in the system. There are two date and two time format options:

- Date Format Options: MM-DD-YY or DD-MM-YY

  Example: May 31, 2008 in MM-DD-YY format is 05-31-08, for DD-MM-YY format is 31-05-08.

- Time Format Options: 12H or 24H

  Example: 8:30 P.M. in 12-hour format is 08:30 PM, in 24-hour format it is 20:30.

ADMIN PROGRAMMING

Set LCD Time/Date/Language Display Mode

LCD Time Display Mode -- two LCD Time formats are available: ordinary (12-hour), and military (24-hour) mode.	PGM 169 + FLEX 1 + 1 (12H) + [HOLD/SAVE]	VALUES -- 0 = 24-Hour Mode 1 = 12-Hour Mode
LCD Date Display Mode -- two LCD date formats are available: Day/Month/Year or Month/Day/Year mode.	PGM 169 + FLEX 2 + 1 (MMDDYY) + [HOLD/SAVE]	VALUES -- 0 = DDMMYY 1 = MMDDYY
LCD Language Display Mode -- a choice of 16 LCD language formats can be selected.	PGM 169 + FLEX 3 + VALUE (Range 00-15) + [HOLD/SAVE]	VALUES -- 00 = English 01 = Italian 02 = Finnish 03 = Dutch 04 = Swedish 05 = Danish 06 = Norwegian 07 = Hebrew 08 = Germany 09 = French 10 = Portuguese 11 = Spanish 12 = Korean 13 = Estonia 14 = Russian 15 = Turkish

OPERATION / SETUP

To toggle between the Date formats:

Press [TRANS/PGM], then 044.

To toggle between the Time formats:

Press [TRANS/PGM], then 045.

Day / Night Service

CO call destinations can be changed according to the time of day. This means that if a call comes in at 8:00am, it might go to a live Operator, while if it comes in at 8:00pm it might go to the group or person covering evening calls. In addition, calls coming in during non-business hours, weekend, or holidays, can be sent to the Auto Attendant, etc.

There are six ring modes: Day / Night / Weekend / On-Demand / Automatic Ring / Lunch

NOTE: According to ATD ring mode setting, Lunch Mode can be applied in DISA service, Ring Assigned incoming call, DID service (see ADMIN PROGRAMMING).

CONDITIONS

- The destination of a CO call can be set differently for each ring mode.
- Only an Attendant can change the ring mode. However, a user can use ADMIN PROGRAMMING to set the destination of CO call.
- Any attendant can change the Ring Mode of an Intercom Tenancy Group. However, when an Attendant of an Intercom Tenancy Group changes the ring mode, only the ring mode of the Intercom Tenancy Group to which the Attendant belongs is changed. If a Main Attendant changes the ring mode, the ring mode of the entire system will be changed.
- The Automatic Ring mode can be set as Day mode, Night mode, Weekend mode according to the Weekly Time Table (see above).
- The On-Demand mode is used to supply a different destination of CO call, except Day mode, Night mode, or Weekend mode. In addition, it is not available for us as the Automatic Ring mode.
- When the ring mode is set to Automatic Ring mode by the Main Attendant, the ring mode of the system will follow the first table entry (entry number: 00) of the Weekly Time Table.
- If the system ring mode is changed from the Night/Weekend/On-Demand/Auto Ring mode to Day mode, the Ring mode of all Intercom Tenancy Groups will change to the previous ring mode.
- There is no default assigned to the Lunch Mode.
- In PGM 144, Weekend mode, Lunch mode, or On-Demand mode, if a station is assigned as the Ring destination, the only available Ring Delay Count is 0.

IMPORTANT: There cannot be two modes in Weekly Time Table set for the same time (for example, Day Start Time and Lunch Start Time are the same). If this occurs, the modes set cannot work properly.

ADMIN PROGRAMMING

Set the DISA Attribute

Use PGM 140 … see page 1-128

Set CO Line Ring Assignment

When CO Service Type (PGM 140) is set to Normal, incoming CO calls are routed according to the destination assignment. The destination can be a station, Hunt Group, VMIB announcement, Net-Station, or VM station number. The Ring Assignment is applied separately to the Day/Night/Weekend/Lunch/On-Demand Ring Mode using FLEX 1-5.

Ring Assignment -- used to set the Ring Assignment to a Station, Hunt Group, VMIB Announce, Net-Station, or Auto Fwd to VM. - To assign a call to a station, the delay value must be entered. If delay value is set, the call will begin to ring after delay time has expired. - To receive incoming calls instantly, delay value should be set to 0. (Attendant Station 100 is assigned with delay of 0.) - To delete a programmed CO ring assignment, press the [SPEED] button instead of entering a delay value.	PGM 144 + FLEX 1-5 + Destination Type (1-5) + number or range (based on destination type) + [HOLD/SAVE].	VALUES -- FLEX 1 = Day FLEX 2 = Night FLEX 3 = Weekend FLEX 4 = Lunch FLEX 5 = On-demand Destination Type: 1 = Station Range + Delay (0-9) 2 = Hunt Group (620-629) 3 = VMIB (VMID MSG # 00-70) 4 = Net-Sta # 5 = Auto Fwd to VM (VM Sta #)
CO Ring Assignment Display -- used to check ring assignment destination of a CO line for each Day/Night Ring Mode. - If CO Calls are assigned to the station during Day or Night Mode, the delay value can be viewed (ex., value 100(1) means station 100 will receive a ring with a delay value of 1).	PGM 145 + FLEX 1	VALUES -- FLEX 1 = Day FLEX 2 = Night FLEX 3 = Weekend FLEX 4 = Lunch FLEX 5 = On-demand

Access Flexible DID Table

Use PGM 231 … see page 1-125.

Access Weekly Time Table

The Weekly Time Table can manage ring mode changes automatically. The use of the WEEKLY TIME TABLE is executed by the System Attendant and each Intercom Tenancy Group Attendant. The first table is for the System Attendant, and the others are for the Intercom Tenancy Group Attendant.The table consists of 7 days - Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, & Sunday. On each day, the time zone of DAY/NIGHT/WEEKEND mode can be programmed.

For example, the office work starts at 9:00 a.m. and finishes at 5:00 p.m.during week days. The weekend starts at 5:00 p.m. from Friday to Sunday. In this case, the WEEKLY TIME TABLE can be set as shown:

SAMPLE WEEKLY TIME TABLE

WEEKLY TBL: MON D:09:00 N:17:00 W:	WEEKLY TBL: TUE D:09:00 N:17:00 W:	WEEKLY TBL: WED D:09:00 N:17:00 W:	WEEKLY TBL: THU D:09:00 N:17:00 W:
WEEKLY TBL: FRI D:09:00 N: W:17:00	WEEKLY TBL: SAT D: N: W:00:00	WEEKLY TBL: SUN D: N: W:00:00	

Weekly Time Table -- this table is executed by the System Attendant and each Intercom Tenancy Group Attendant. Time zone of DAY/NIGHT/WEEKEND for 7 days is programmed.	PGM 233 + VALUE (Weekly Time table, Range = 0-5) + FLEX 1 (Day Mode, Range = FLEX 1 - FLEX 7) + FLEX 1 (Day Start, Night Start, Weekend Start, Lunch Start, Lunch End, Range = FLEX 1-FLEX 5) + Enter Time (HH/MM) + [HOLD/SAVE]	VALUES -- - Weekly Time Table (0-5) - FLEX 1 (Day Mode F1-7) F1 Monday F2 Tuesday F3 Wednesday F4 Thursday F5 Friday F6 Saturday F7 Sunday - FLEX 1 (Start/End Time - HH/MM) F1 - Day Start F2 - Night Start F3 - Weekend Start F4 - Lunch Start F5 - Lunch End

OPERATION / SETUP

To change the Day/Night Service mode:

1. Press [TRANS/PGM], then press 074] and select a ring mode (1-6).
2. Press [HOLD/SAVE] to activate ring mode.

NOTE: Time can be set for each mode automatically using the Weekly Time Table.

To change the time of a Day/Night Service mode:

Press PGM 233, then enter the times as needed.

NOTE: The default values of the Weekly Times are shown below. The first time settings are for the Main Attendant (entry 00). Intercom Tenancy Group Attendants time settings follow the Main Attendant (entry 01-15).

DATE	DAY START TIME	LUNCH START TIME	LUNCH END TIME	NIGHT START TIME	WEEKEND START TIME
Mon	09:00	-:-	-:-	18:00	-:-
Tues	09:00	-:-	-:-	18:00	-:-
Wed	09:00	-:-	-:-	18:00	-:-
Thurs	09:00	-:-	-:-	18:00	-:-
Fri	09:00	-:-	-:-	-:-	18:00
Sat	-:-	-:-	-:-	-:-	00:00
Sun	-:-	-:-	-:-	-:-	00:00

Outgoing Access

The Attendant can take a particular CO line out of service. If this occurs, outgoing CO cannot be made while incoming CO calls are not affected.

CONDITIONS

- Any Attendant can use this feature.
- The LED of the CO line Flex button which is with an "out" setting, flashes at the Attendant station, but is solidly lit at other stations.
- If a specific CO line is busy, it can still be taken out of service. The change in setting will take effect after the CO line returns to an idle state.

OPERATION / SETUP

To set the CO line outgoing service:

1. Press [TRANS/PGM], then press 073.
2. Press the appropriate CO line Flex button.
   A confirmation tone will sound when the status of the selected CO line is changed.
3. Press [SPEAKER] to finish.

To release the"out" setting:

1. Press [TRANS/PGM], then press 073.
2. Press the flashing CO line Flex button at the Attendant station.

DSS/BLF Consoles

Attendant stations and other digital phones may be equipped with DSS/BLF consoles which provide additional buttons for additional operation. The consoles are arranged as flexible mapped units. They are initially assigned with programming as one of 3 maps. All buttons of all maps are programmable.

The DSS/BLF consoles each require a separate line connection to the KSU, and take up a station number.

CONDITIONS

- There is no limit to the number of DSS/BLF consoles in a system.
- The default value for DSS/BLF is as follows:

Map 1	Flex 1 - Intrusion Flex 2 - All Call Page Flex 3 - Call Park 01 Flex 4 - Station Group 1 Flex 5 - Camp-on Flex 6 - Internal All Call Page Flex 7 - no default Flex 8 - no default Flex 9 - no default Flex 10 - no default Flex 11 - no default Flex 12 - no default Stations 100-135
Map 2	Stations 136-147
Map 3	Empty

ADMIN PROGRAMMING

Set Station ID Assignment

Station ID Assignment -- Station ID can be changed to the desired value which is different from the default value (e.g., normal DKTU /normal SLT). This identifies the type of telephone (digital, SLT Doorbox/ICM Box) attached to the system.	PGM 110 + FLEX 1 + (Station ID value) + [HOLD/SAVE]	VALUES -- 01 = DKTU 05 = ICM BOX 06 = Reserved 07 = SLT (DTMF) 08 = SLT (PULSE) 09 = Reserved 10 = Reserved 11 = Reserved 12 = SLT - CID (FSK) 13 = SLT - CID (DTMF) 14 = IP Phone

Set DSS/BLF ID Assignment

DSS -- one station can have up to 3 sequentially numbered multiple DSS maps.	PGM 110 + FLEX 2 + (Station ID value) + FLEX 2 + Station Number + [HOLD/SAVE]	VALUES -- 02 = DSS MAP 1 03 = DSS MAP 2 04 = DSS MAP 3

ICM Box Music

An Attendant can select the music channel source that provides music to the intercom Box / Doorbox.

NOTE: Also see "Background Music (BGM)" on page 1-35, and "Music On Hold (MOH)" on page 1-74.

ADMIN PROGRAMMING

Enable Intercom Box Music Channel

ICM Box / Doorbox Music Channel -- establishes which music channel will supply music to Doorbox(es).	PGM 171 + FLEX 3 + 0 (VALUE) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Int. Music 2 = External Music 3 = n/a 4-8 = SLT MOH

OPERATION / SETUP

To select the music source from an Attendant Station:

1. Press [TRANS/PGM], then press 075.
2. Enter the music source/channel (00-12):
   Channel 00: No music
   Channel 01: Internal music
   Channel 02: External music
   Channel 03: VMIB BGM
   Channel 04-08: SLT MOH

   NOTE: As it is selected, the music source will be heard. However, if the music channel has no music source, no music will be heard.
3. Press [HOLD/SAVE] to store the setting.

Station Feature Cancel

The Attendants can cancel features such as DND, Call Forward and pre-selected messages at other stations.

OPERATION / SETUP

To disable active features for a station from an Attendant Station:

1. Press [TRANS/PGM], press 071.
2. Enter the appropriate station range.
3. Press [HOLD/SAVE] to store the setting.

Call Control

Account Code

Account codes are used to identify outgoing (external) calls for accounting and billing purposes. A separate account code can be assigned to each station (up to 12 digits: 0 to 11) so that a company can identify and bill (where applicable) calls made from each station.

IMPORTANT: An ACCOUNT CODE flex button must be programmed before certain aspects of this operation can be performed (see below).

CONDITIONS

- Each station can be assigned its own account code.
- While entering the account code, the current call is put on hold.
- The user may enter the account code before or after a call conversation is established.

ADMIN PROGRAMMING

Set the SMDR Account Enter Code

Use PGM 106, then Flex 7. For more details, refer to the *SBX IP Installation Manual*.

OPERATION / SETUP

To assign an ACCOUNT CODE flex button:

1. Press [TRANS/PGM].
2. Press the Flex button you want to assign as an ACCOUNT CODE button.
3. Press [TRANS/PGM], then press 80.
4. Press [HOLD/SAVE] to store the setting.

To enter an account code before accessing a CO line:

1. Press the programmed ACCOUNT CODE flex button.
2. Enter the account code (max of 12 digits), or press * button.
3. Intercom dial tone should be heard and a CO line is secured to make a call.

To enter an account code during a conversation:

1. While on a CO line call, press the ACCOUNT CODE flex button.

The other party will be put on hold.

2. Enter the account code (max of 12 digits).
3. Press the ACCOUNT CODE flex button.

You will be reconnected to the other party.

To enter an account code during a conversation (w/o using the ACCOUNT CODE flex button):

1. While on a CO line call, press [TRANS/PGM], then 550.
   The other party will be put on hold.
2. Enter the account code (maximum 12 digits), or press * button.
   You will be reconnected to the other party.

Authorization Code

Authorization codes can be assigned to stations to give the users the ability to make calls on restricted phone lines (overriding access restrictions). When a station is programmed to require an Authorization Code, the assigned code must be entered in order to access a CO line.

CONDITIONS

- To prevent restricted, unauthorized phone calls from being made, personal authorization codes should be kept secure by the System Attendant and individual station users.
- An authorization code must contain 3 to 11 digits.
- Each station must have a different authorization code. An authorization code cannot be assigned to more than one station.
- Up to 200 authorization codes can be programmed on the system.
- If Loop LCR ACNT is set on a station, the authorization code is required each time the station dials the Loop LCR CO Access code.
- An authorization code can be used for SMDR, DISA account codes.
- A long beep after a number is dialed indicates the need to enter an authorization code.
- Authorization codes are also used for mailbox passwords. Remote access of a mailbox requires that a authorization code be programmed.

ADMIN PROGRAMMING

Access Authorization Code Table

Authorization code table entries consist of each station password and extra account codes. The table entry from 001 to the maximum capacity of station numbers are saved along with the password of each station. CO Line Groups can be marked to deny access until a matched authorization code is entered. In this case, a DND warning tone is provided when the CO Line Group access code is dialed.

There can be no duplicate entries. By default, Authorization Codes are not assigned. In an SBX IP system, the total number of Authorization Codes is 200 entries.

Authorization code length can be programmed as 5 digits or variable length (3-11digits). If 5-digit authorization code usage is programmed, the authorization code works as 5-digit length in admin program or features.

Enter the appropriate Bin number (001-200), then follow the procedure as shown:

Authorization Code Table -- if the dialed Authorization code is verified, a CO dial tone will be presented. Otherwise, an error tone will be heard and access to the group will be denied. Stations or Admin programming can enter authorization codes. The Administrator can see and change station passwords-no duplicate entries. The total number of Authorization Codes is 200 entries.	PGM 227 + FLEX 1 + Authorization Code (3-11 digits; Range = 0-9) + [HOLD/SAVE]	VALUES -- Default = Not Assigned Authorization codes can be programmed as 5 digits or flexible length (3-11 digits); refer to PGM 161 - FLEX21
Day COS of Authorization Code -- Day COS of stations can only be viewed; COS for extra entries can also be assigned.	PGM 227 + FLEX 2 + Class of Service Value + [HOLD/SAVE]	VALUES -- Range = 1-9
Night COS of Authorization Code -- Night COS of stations can only be viewed; Night COS for extra entries can also be assigned.	PGM 227 + FLEX 3 + Class of Service Value + [HOLD/SAVE]	VALUES -- Range = 1-9

Set DISA Account Code

Use PGM 141 … see page 1-130.

Access CO Line Group Account

CO Line Group Account -- if this value is set to ON, the CO Line user will be prompted to enter an authorization code to access this CO Line.	PGM 141 + FLEX 9 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 - On

Set Loop LCR Account Code

Loop LCR Account Code -- if value is set to ON, the Station User must enter an Account Code to use Loop LCR.	PGM 111 + FLEX 16 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set 5 Digit Authorization Code Usage

5 Digits Authorization Code Usage -- if value is set to ON, Authorization code is programmed as 5 digits fixed length. Under this mode, 5 digits of the authorization code should be entered when related features are activated. If this value is set to OFF, Variable Authorization code (3-11 digits) is used.	PGM 161 + FLEX 21 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable Station Account

Forced Station Account Code -- if this value is set to ON, a password is needed to access an outgoing CO line.	PGM 112 + FLEX 20 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To access a CO line using an authorization code:

1. When a long warning tone sounds after dialing, enter the designated authorization code.
2. Press # to complete the entry.

   NOTE: If a five digit authorization code type (see ADMIN PROGRAMMING), you do not need to press #. If the code entered is valid/correct, the CO line will be connected. Otherwise, an error tone will be presented.

To register the authorization code on a station:

1. Press [TRANS/PGM], then 31.
2. Enter the authorization code, then press #.

   NOTE: If a five digit authorization code type (see ADMIN PROGRAMMING), you do not need to press #.
3. Press [HOLD/SAVE] to store the changes.

To change the authorization code at a station:

1. Press [TRANS/PGM], then 32.
2. Enter the current authorization code.
3. Enter in the new authorization code.
4. Press [HOLD/SAVE] to store the change.

Automatic Call Release

When a station does not complete a connection on an outgoing CO line, or receives no answer on an intercom call, the system will disconnect the call based on assigned Auto Release Timer.

CONDITIONS

- If a user station is in speaker mode, the Station returns to idle, otherwise the station will receive an error tone if using the handset.
- An Intercom call in Hands-Free mode is answered, Station Auto Release will not be activated.

- When the Automatic Release time is set to 0, the feature is not activated.
- If a call is dialed without lifting the handset, and the Auto Release timer expires, the call will be canceled. In addition, the station will automatically return to an idle state.
- If a call is dialed using the handset, and the Auto Release timer expires, the call will be canceled. An error tone will sound.

ADMIN PROGRAMMING

Set Automatic CO Release Timer

Automatic CO Release Timer -- Uncompleted CO line calls will automatically be released when the timer expires.	PGM 180 + FLEX 14 + 030 (seconds, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 020-300

Set Station Auto Release Timer

Station Auto Release Timer -- If a station user hears a ring back tone and no action is taken within the designated time, the station will be released.	PGM 182 + FLEX 5 + 060 Value (1 sec, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 020-300

Class Of Service (COS)

Each station and CO line may be assigned different classes to either allow or restrict call service. The level of COS assignments are programmed at each station and each CO line.

CONDITIONS

COS Rules

- In STA COS 7, no dialing is allowed on CO lines.
- In CO COS 5, STA COS 1-6 is ignored, and there is no restriction on access to CO lines.
- CO COS 4, STA COS 1-6 are ignored, and long distance calls are not allowed; max. 8 digits may be dialed.
- CO COS 1 is restricted by the STA COS.
- CO COS 2 and STA COS 2/4 are restricted by Exception Table A.
- There is no restriction in STA COS 1/3.
- In STA COS 5, long distance calls are not allowed; max. 8 digits can be dialed.

CO lines Allow/Deny Restriction Rules

- If there are no entries, no restriction is provided by the table.
- If there are entries in the Deny table, then the restriction is on a Deny Only basis.
- If there are entries in the Allow table, then the restriction is on an Allow Only basis.
- If there are entries in both the Allow and Deny Tables, the Allow Table is searched first. If a dialed number matches an entry in the Allow Table, the call is allowed. If a match is not found, then the Deny Table is searched. If a match is found in the Deny Table, the number is restricted. If no match is found in either table, the number is allowed.

General Rules

- PBX Access Codes: There are five (2-digit) PBX access codes that allow you to enter the system and access a CO line via PBX. A CO line marked as a PBX line will not be controlled by any station or CO line COS until a recognized PBX code is dialed.
- Canned Restrictions: Canned, Restricted 1: Long distance call is not allowed. Canned, Restricted 2: Long distance call is not allowed. Max. 8 digits (*, 0, # can not be dialed).
- Exception Tables A and B: These are the two exception tables for COS. Each table has 20 "allow" codes and 10 "deny" codes. Each code may have eight entries.
- CO Call Toll Checks: If an incoming CO Call Toll Check is set, the COS rule is applied when the station dials after answering an incoming CO call.

		CO LINE COS				
STATION COS		1	2	3	4	5
	1	Unrestricted	Unrestricted	Unrestricted	Canned Restricted 2	Unrestricted
	2	Table A	Table A	Unrestricted	Canned Restricted 2	Unrestricted
	3	Table B	Unrestricted	Table B	Canned Restricted 2	Unrestricted
	4	Table A, B	Table A	Table B	Canned Restricted 2	Unrestricted
	5	Canned Restricted 1	Canned Restricted 1	Canned Restricted 1	Canned Restricted 2	Unrestricted
	6	Canned Restricted 2	Canned Restricted 2	Canned Restricted 2	Canned Restricted 2	Unrestricted
	7	Intercom Only	Intercom Only	Intercom Only	Intercom Only	Intercom Only
	8	Table C	Table C	Unrestricted	Canned Restricted 2	Unrestricted
	9	Table D	Table D	Unrestricted	Canned Restricted 2	Unrestricted
	10	Table C, D	Table C, D	Unrestricted	Canned Restricted 2	Unrestricted
	11	Table A, B, C, D	Table A, B, C, D	Unrestricted	Canned Restricted 2	Unrestricted

COS 1	There is no restriction to dial.
COS 2	Monitored by Exception Table A
COS 3	Monitored by Exception Table B
COS 4	Monitored by Exception Table A & B
COS 5	Long distance call is not allowed; longer than 8 digits
COS 6	Long distance call is not allowed; max. 8 digits may be dialed
COS 7	Only intercom, paging and emergency calls are allowed; no dialing allowed on CO lines
COS 8	Monitored by Exception Table C
COS 9	Monitored by Exception Table C

COS 1	There is no restriction. Monitored by STA COS.
COS 2	Monitored by Exception Table A & STA COS 2/4.
COS 3	Monitored by Exception Table B & STA COS 2/4
COS 4	Long distance call is not allowed for all STA COS; max. 8 digits may be dialed
COS 5	Overrides STA COS 2, 3, 4, 5, 6, no COS restriction

COS 1	There is no restriction to dial
COS 2	Monitored by Exception Table A
COS 3	Monitored by Exception Table B
COS 4	Monitored by Exception Table A & B
COS 5	Long distance call is not allowed; longer than 8 digits
COS 6	Long distance call is not allowed; only max. 8 digits may be dialed
COS 7	Only intercom, paging and emergency call are allowed; no dialing allowed on CO lines
COS 8	The assignments in the Exception Table C are monitored for allow and deny numbers
COS 9	The assignments in the Exception Table D are monitored for allow and deny numbers

ADMIN PROGRAMMING

Set Station COS

Enter the appropriate station range, then follow the procedure as shown:

Station COS -- each station is assigned a Class Of Service (COS) that determines the station toll restriction for day and night operation (refer to Table). On a particular call, the CO COS is combined with Station COS to determine the restriction. COS for all stations at day and night operation are 1 by default. The weekend COS is the same as night COS.	PGM 116 + FLEX 1 (Day) + 1 (sta COS range = 1-11) + [HOLD/SAVE] PGM 116 + FLEX 2 (Night) + 1 (sta COS range = 1-11) + [HOLD/SAVE]	VALUES -- FLEX 1 = Day FLEX 2 = Night

STA COS	DESCRIPTION
1	No restrictions are placed at the station for dialing.
2	Assignments in Exception Table A are monitored for Allow and Deny numbers.
3	Assignments in Exception Table B are monitored for Allow and Deny numbers.
4	Assignments in Exception Tables A & B are monitored for Allow and Deny numbers.
5	Leading digit dialed cannot be a long distance code. The dialed digits can be longer than 7 digits. There is no restriction for the number in the Canned Toll Table.
6	Leading digits cannot be a long distance code. Only eight digits maximum can be dialed. (There is no restriction for the number in the Canned Toll Table.)
7	Intercom and paging calls are allowed. No dialing is allowed on CO lines. ICM boxes are assigned with this COS.
8	Assignments in Exception Table C are monitored for allow and deny numbers.
9	Assignments in Exception Table D are monitored for allow and deny numbers.
10	Assignments in Exception Tables C & D are monitored for allow and deny numbers.
11	Assignments in Exception Tables A, B, C, & D are monitored for allow and deny numbers.

Set CO Line COS

CO COS -- COS is assigned to each CO line.	PGM 141 + FLEX 2 + 1 (COS) + [HOLD/SAVE]	VALUES -- 1 = No restriction 2 = Exception Table A governs 3 = Exception Table B governs 4 = Restricts Long Distance Code 5 = Overrides Station COS 2-6

Set CO-to-CO COS

Day COS -- Class-of-Service of Day Mode	PGM 166 + FLEX 1 + 07 (VALUE) + [HOLD/SAVE]	VALUES -- 01-11
Night/Weekend COS -- Class-of-Service of Night/Weekend Mode	PGM 166 + FLEX 2 + 07 (VALUE) + [HOLD/SAVE]	VALUES -- 01-11

Access Toll Exception Table

The Allow/Deny Tables are organized into 2 sets of tables to support 2 different toll plans at one installed site. Each allow/deny table may contain up to 30 number strings. All bins of allow and deny tables have no entries by default. Each number string can contain up to 14 entries including any number 0-9, *, #, "Don't care."

The following rules should be remembered when setting up the Allow/Deny Tables:

- If the tables have no entries, no restriction is applied.
- If entries are made in the allow table and only there, then only those numbers are allowed.
- If entries are made in the deny table and only there, then only those numbers are denied.
- If there are entries in both tables, the allow table is searched at first and if number is found, it is allowed. If not found, the deny table is searched and if number is found, it is denied. If it is not found in either table, it is allowed.

RULE	ENTRY		CONDITIONS & RESULT	
	ALLOW	DENY	ALLOW TABLE	DENY TABLE
1	Not Exist	Not Exist	No Restriction	No Restriction
2	Exist	Not Exist	Found - allowed Not found - denied	--
3	Not Exist	Exist	--	Found - denied Not found - allowed
4	Exist	Exist	Found - allowed Not found - check deny table	Found - denied Not found - allowed

Allow Table A - -used to check whether the dialed digits by COS 2 and COS 4 station is matched with the allowed toll pass digits. NOTE: Allow table A is only used when the COS of dialed station is COS 2 or 4.	PGM 224 + FLEX 1 + VALUE (refer to Allow Table) + Allow Number (max 14 digits; 0-9, #, *, Don't Care) + [HOLD/SAVE]	VALUES -- Range = 01-30
Deny Table A -- used to check whether the dialed digits by COS 2 and COS 4 station is matched with the denied toll pass digits. NOTE: Deny table A is only used when the COS of dialed station is COS 2 or 4.	PGM 224 + FLEX 2 + VALUE (refer to Deny Table) + Deny Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-30
Allow Table B -- used to check whether the dialed digits by COS 3 and COS 4 station is matched with the allowed toll pass. NOTE: Allow table B is only used when the COS of dialed station is COS 3 or 4.	PGM 224 + FLEX 3 + VALUE (refer to Allow Table) + Allow Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-30
Deny Table B -- used to check whether the dialed digits by COS 3 and COS 4 station is matched with the denied toll pass digits. NOTE: Deny table B is only used when the COS of dialed station is COS 3 or 4.	PGM 224 + FLEX 4 + VALUE (refer to Deny Table) + Deny Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-30
Allow Table C -- used to check whether the dialed digits by COS 8 station is matched with the allowed toll pass digits. NOTE: Allow table A is only used when the COS of dialed station is COS 8.	PGM 224 + FLEX 5 + VALUE (refer to Allow Table) + Allow Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-50
Deny Table C -- used to check whether the dialed digits by COS 8 station is matched with the denied toll pass digits. NOTE: Deny table A is only used when the COS of dialed station is COS 8.	PGM 224 + FLEX 6 + VALUE (refer to Deny Table) + Deny Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-50
Allow Table D -- used to check whether the dialed digits by COS 9 Station is matched with the allowed toll pass. NOTE: Allow table B is only used when the COS of dialed station is COS 9.	PGM 224 + FLEX 7 + VALUE (refer to Allow Table) + Allow Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-50
Deny Table D -- used to check whether the dialed digits by COS 9 Station is matched with the denied toll pass digits. NOTE: Deny table B is only used when the COS of dialed station is COS 9.	PGM 224 + FLEX 8 + VALUE (refer to Deny Table) + Deny Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-50
If programming FLEX 1-4, you must re-enter PGM 224 to gain access to programming of FLEX 5-8 and vice versa.		

Access Canned Toll Tables

In addition to the basic toll restrictions, stations within COS 5 or 6 are subject to dial restrictions based on the Canned Allow and Deny Tables. This program permits entries in the Canned Toll Tables. Both the Allow and Deny table have 20 bins up to 14 digits.

VALID DATA	FUNCTION	LCD DISPLAY
0-9, *, #	Number	as dialed
[DND/FWD]	Don't Care	"D"

Allow Table -- used to check, whether the dialed digits by COS 5 and COS 6 station is matched with the allowed toll pass digits. NOTE: Allow table of canned toll is only used when the COS of dialed station is COS 5 or 6.	PGM 225 + FLEX 1 + VALUE (refer to Allow Table) + Allow Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-20
Deny Table -- used to check whether the dialed digits by COS 5 and COS 6 station is matched with the denied toll pass digits. NOTE: Deny table of canned toll is only used when the COS of dialed station is COS 5 or 6.	PGM 225 + FLEX 2 + VALUE (refer to Deny Table) + Deny Number (Max 14 Digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- Range = 01-20

Enable Incoming Toll Check

Incoming Toll Check -- if this value is set to ON, the system checks for tolls applied to incoming CO calls.	PGM 161 + FLEX 16 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

System Speed Zone

System Speed Zones consist of Speed bins & stations. Toll checks based on COS can be applied to zones. Up to 10 speed number zones can be defined. Only stations allocated to zones can access these bins. Speed bins not allocated to zones can be accessed by all stations and no toll checks are applied.

ADMIN PROGRAMMING

Enable Speed Dial Access

Use PGM 112, then FLEX 9 … see page 1-168.

Assign System Speed Zone

Use PGM 232 … see page 1-168.

Enable CO Dial Tone Detect

CO Dial-Tone Detect -- when speed dial is activated, if this value is set to ON, the system will detect a dial tone using CPT instead of the pause timer.	PGM 160 + FLEX 6 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = OFF 1 = ON

Walking Class of Service (Walking COS)

This feature allows temporary override of the toll restriction to allow toll call from previously toll restricted phones. The authorization code can be used as a verified account code for SMDR.

CONDITIONS

- This feature can be used on both digital and SLT phones.
- This feature is available on a per-use basis only. The original programmed station COS will be used when activating Walking COS, disconnecting a call, or pressing [TRANS/PGM] to hold the call (and seize another line).
- When a wrong number is dialed, press [FLASH] to dial again without having to access another idle CO line.
- The fee for a call with Walking COS will be charged according to the station authorization code, not the actual station.
- When a user tries to use Walking COS at a station set to COS 7 (with temporary COS), the call will follow the original COS of the station.

ADMIN PROGRAMMING

Access the Authorization Code Table

Use PGM 227 … see page 1-20.

OPERATION / SETUP

To activate Walking COS:

1. Press [TRANS/PGM], then press 23.
   A confirmation tone sounds.
2. Enter the authorization code; the intercom dial tone sounds and the used extension COS is temporarily changed. (Note: A CO call can only be placed one time.)

To program a Walking COS flex button:

1. Press [TRANS/PGM], then the applicable Flex button.
2. Press [TRANS/PGM], then 23.
3. Press [HOLD/SAVE] to store the setting.

Call Handling

Alarm

This feature allows you to set up an external contact to create an internal alarm. When the contact is established and programmed, an alarm tone (single tone repeated per 1-min. interval or a continuous tone) can be sent to designated stations within the system.

CONDITIONS

- An external contact should be connected to the alarm input.
- The alarm contacts should be dry (no voltage/current source connected).
- Single Line Telephones (SLTs) cannot receive alarm signals.
- An Alarm Reset can be programmed on a Flex button.

ADMIN PROGRAMMING

Enable Alarm

Alarm Enable -- if value is set to ON, Alarm is available.	PGM 163 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Alarm Contact Type

Alarm Contact Type -- if value is set to OPEN, when alarm relay is open, then alarm ring is provided.	PGM 163 + FLEX 2 + 1 (Close) + [HOLD/SAVE]	VALUES -- 0 = Open 1 = Close

Select Alarm Mode

Alarm Mode -- if value is set to DOOR BELL, alarm signal is provided only one time. If value is set to ALARM, alarm signal is provided continuously depending on Alarm Signal Mode (Flex 4).	PGM 163 + FLEX 3 + 1 (Alarm) + [HOLD/SAVE]	VALUES -- 0 = Door Bell 1 = Alarm

Select Alarm Signal Mode

Alarm Signal Mode -- if value is set to REPEAT, the Alarm Signal is repeated until Alarm is reset.	PGM 163 + FLEX 4 + 1 (Repeat) + [HOLD/SAVE]	VALUES - 0 = Once 1 = Repeat

OPERATION / SETUP

To terminate the alarm signal from an Attendant Station:

Press 565.

A confirmation tone sounds, and the alarm signal will be terminated at all assigned stations.

Automatic Incoming Fax Transfer

The system automatically determines if an incoming call from the designated analog CO line is for a fax or for a speech terminal by detecting the tone of the call (that is, 1100Hz, 0.5s ON/3s OFF repeated). When the system detects a fax tone from the incoming line within the predetermined time, the system transfers the call to the appropriate fax station. If the fax tone is not detected within the predetermined time, the system interprets this as a normal phone call (no fax), so the call is transferred to the specified station.

IMPORTANT: Only analog lines are enabled for using this feature.

CONDITIONS

- Only one CO line can be designated as a fax CO line. If a fax CO line is not programmed, Automatic Fax Transfer cannot be activated.
- Station 17 is pre-programed station for fax transfers. Therefore, the fax machine should be connected to the port for Station 17.
- If the fax CO line is not answered within the fax CO call time, the incoming call will be disconnected.
- An outside caller connected to the fax CO line will hear a ring back tone when the system detects a fax tone.
- To transfer calls from the fax to a fax station, do not assign CO ring to the fax Station 17.
- If a CO line is programmed for DISA, as well as for Automatic Fax Transfer, incoming calls from that CO line are served as DISA calls. Therefore, if a user wants to call the fax station, they will need to call Station 17 via the DISA call.
- When the fax machine goes idle after a fax call, the associated CO line is released.
- If the fax CO line is disconnected during a fax call, the CO line is released, and the fax machine returns to an idle state.

ADMIN PROGRAMMING

Set Auto Fax Transfer CO

Auto Fax Transfer CO -- if an Auto FAX CO line is programmed, the system answers and detects the FAX calling tone (1100Hz, 0.5sec ON/3sec OFF repeat tone) from an incoming analog CO line. The system will route this call to the last SLT port on basic MBU when tone is detected within the programmed time.	PGM 161 + FLEX 17 + Value (CO Line number) + [HOLD/SAVE]	VALUES -- Range = 01-36 (avail for Analog CO line)

Set Fax Tone Detect Timer

Fax Tone Detect Timer -- designates the amount of time allowed to detect a FAX tone from the FAX CO line before the call is routed to the ring assigned Station for FAX CO line	PGM 182 + FLEX 13 + 05 seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-10 secs (5 sec is suggested)

Set Fax CO Call Timer

Fax CO Call Timer -- designates the amount of time allowed to connect a call when a FAX tone is detected from a FAX CO line; the call will attempt to be routed to the appropriate FAX station.	Enter Bin number (01-10), then PGM 182 + FLEX 14 + 1 minute (1 digit) + [HOLD/SAVE]	VALUES -- Range = 1-5 mins

Automatic Privacy

By default, all conversations (on CO lines, the intercom, and conferences) are protected by privacy (Automatic privacy). This prevents one station from accessing a line to listen in on a conversation. However, this feature can be disabled by the station user as needed (via the HTP feature). To allow a user to have the ability to enable or disable Automatic Privacy, the System Attendant must make such a configuration in the system.

CONDITIONS

- If Automatic Privacy is enabled, a busy tone is heard when an attempt is made to access a busy CO line.
- If Automatic Privacy is disabled, intruding station is connected to conversation in progress.
- When Automatic Privacy is disabled, privacy is still active for Intercom & Conference calls.
- A station can only override a privacy-disabled station.
- The station with Privacy disabled will hear an "intrustion" tone when another station accesses the line.

ADMIN PROGRAMMING

Enable Auto Privacy

Auto Privacy -- if value is set to ON, a call is protected from override regardless of Station Override Privilege (PGM 113 - FLEX 4).	PGM 161 + FLEX 5 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Privacy Warning Tone

Privacy Warning Tone -- if value is set to ON, a privacy warning tone will be heard when a call is overridden.	PGM 161 + FLEX 6 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable Override Privilege

Override Privilege -- if value is set to ON, the station user can override a CO Call.	PGM 113 + FLEX 4 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Barge In

The Barge In feature permits one station (with authorization) to intrude into existing outside/internal calls on other stations. Barging In actually establishes a conference call.

There are two Barging In modes:

- **Monitor** - allows one station to listen to (but not participate in) an existing conversation.
- **Speech** - allows one station to join an existing conversation.

CONDITIONS

- This feature is only supported for digital phones that have (three) soft buttons.
- This feature is only available for a called party in "talk state" on a CO Line or intercom.
- An Emergency Supervisor is only connected to an Attendant Station when the Executive Station is called.

ADMIN PROGRAMMING

Enable Barge In mode

Barge In Mode -- if in monitor mode, a barge in station can only hear the current conversation. If in speech mode, a barge in station can converse.	PGM 113 + FLEX 13 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Monitor mode 2 = Speech mode

OPERATION / SETUP

To use the Monitor mode:

When you receive the busy tone at a station, press the "MONITOR" soft button.

(Those already participating in the conversation hear a warning tone, and you can listen into the conversation.)

To use the Speech mode:

While you are listening to the existing conversation, press the "JOIN" soft button.

(Those already participating in the conversation hear a warning tone, and you can participate in the conversation.)

To cancel the Monitor or Speech mode:

Press the "DROP" soft button or hang up.

Background Music (BGM)

A station user can listen to Background Music (BGM) through the speaker while the handset is on-hook, and the line is in an idle state.

- Music can be enabled on an external page port from the Attendant Station.
- Background music can be transmitted through the intercom box at an Attendant Station.

CONDITIONS

- Music from the source is heard over the station speaker and will be shut-off automatically when a call or paging announcement is received, or when the station is taken off-hook.
- When lifting handset or pressing [SPEAKER] at a station, music is automatically shut-off.
- When external music is assigned, the music source should be connected to the MBU.
- The same music source can be used with MOH (see 1-74).
- Press the volume buttons to adjust the volume while the background music is heard.
- Press the [DND/FWD] to block BGM to block an intercom box / Doorbox.
- Also see ICM Box Music on page 1-17, and Music On Hold (MOH) on page 1-74.

ADMIN PROGRAMMING

Choose Background Music Type

BGM Type -- This is Background Music type (internal, external, or SLT).	PGM 171 + FLEX 1 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Int. Music 2 = Ext. Music 3 = n/a 4-8 = SLT MOH

OPERATION / SETUP

To enable background music at a station:

Press [TRANS/PGM], then press 73 to hear the music through the speaker.

To transmit background music on an external page port at the Attendant Station:

1. Press [TRANS/PGM], then press 076 (External port).
2. Enter the background music channel number.
   The music will play.
3. Press [HOLD/SAVE] to store the setting.
   After hearing the confirmation tone, the station should go to an idle state, and the selected background music will be transmitted on an external port.

To transmit background music through the intercom box at an Attendant Station:

1. Press [TRANS/PGM], then press 075.
2. Enter the background music channel number.
3. Press [HOLD/SAVE] to store the setting.
   After the confirmation tone is sounded, the station will go into an idle state. The selected background music will be transmitted over the intercom box.

Call Log (Models 7208D/7224D only)

The Call Log feature enables the station user to view a log of the last (15 to 50) incoming, outgoing, and lost calls. The user can scroll through the list of numbers stored, select the appropriate number, and activate a redial to that number.

The log includes the dialed number (CLI), the time, the date, and Station/System Speed name of the call (if applicable). It is stored on the MBU, so it is retained even if the station is unplugged or replaced.

IMPORTANT: This feature is only available if a flex button has been programmed.

CONDITIONS

- To use this feature, a flex button must be programmed for the call log.
- A user can program the Call Log List number (in the range of 15 to 50 - per station).
- When the Call Log List number is programmed, the All Call Log database will be initialized.
- The maximum Call Log List items allowed per system is 500.
- The system assigns the Call Log list in order from the first available port.
- CLI MSG-Wait must be enabled in order to use the Lost Call Log.

ADMIN PROGRAMMING

Set Call Log List Number

Call Log List Number -- sets the number of Call Log Lists per Station.	PGM 160 + FLEX 19 + Value (10, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 10-50

Enable CLI Message Wait

Use PGM 114, then FLEX 4 … see page 1-136.

OPERATION / SETUP

To program a Call Log flex button:

1. Press [TRANS/PGM], then press the flex button to be assigned for the Call Log feature.
2. Enter the Call Log code, then press [TRANS/PGM].
3. Press 57.
4. Press [HOLD/SAVE] to store the setting.

To use the Call Log feature:

1. Press the programmed {CALL LOG} button.
2. Use the up/down navigation buttons to scroll through the numbers to locate received calls, dialed calls, and lost calls, as needed.
3. When the CLI of the appropriate number is displayed, press OK button.
   The system will establish a call to that number.
4. Select the Lost Call Menu to view CLI MSG-Wait numbers.
   A number in the Lost Call list can be answered, deleted, or saved by pressing the Select soft button.

Call Screening

When a call is sent to a voice mailbox, the station associated with that mailbox can press a pre-programmed button to listen to the caller leaving the voice mail message. If the mailbox owner decides to speak with the caller, the owner can press the pre-programmed button to be connected to the caller.

Notification Methods

Two methods of notification are available: Ring Mode or Speaker Mode. The pre-programmed button type (Ring Mode or Spkr Mode) defines the operation mode.

EX. -- Station A user places their phone in the answering machine mode by pressing the flexible button programmed on the telephone. The button light is solid red. When an incoming CO call rings at a station and forwards (except busy type) to the station's voice mailbox, the following will occur:

- In RING MODE, the preprogrammed answering machine flexible button flashes red while the caller is in the owner's mailbox. The mailbox owner presses the pre-programmed flashing button and the audio is broadcast over the speaker of the keyset. The mute key is enabled on the keyset at this point. The LED light is solid green.
- In SPKR MODE, the voice mail message is broadcast over the speaker. The mute key is enabled on the keyset and the LED light is solid green.

CONDITIONS

- The user must have a digital Keyset.
- Keyset users must pre-program a CALL SCREENING flexible button.
- An idle station can press the flexible button to go to the inactive mode. The LED extinguishes and No Answer calls are presented to the station.
- When button is programmed at the station, it is in the inactive mode (LED extinguishes).

- When the owner presses the pre-programmed button to be connected to the caller, the voice message will not be saved.
- This is available for No Answer forward type.

ADMIN PROGRAMMING

Enable VMIB Access

Use (PGM 113), then FLEX 2 … see page C-21.

Assign Flex Button/Station Programming Button

Use PGM 115 … see page 1-55.

OPERATION / SETUP

To set the Operation Mode:

1. Press [TRANS/PGM]
2. Press the desired flexible button for programming.
3. Dial [XXX] + [0] to select the ring mode or dial [XXX] + [1] to select the speaker mode. A confirmation tone sounds.

Camp-on

Camp-On allows you to set your phone to automatically call back a station that is busy. The camp-on tone sounds at the busy station and the [HOLD/SAVE] LED flashes to notify the user of the waiting call.

NOTE: An SLT user can notify a busy station of a CO or intercom call waiting.

CONDITIONS

- Camp-on is not applied to a station which is in DND mode, on a conference call, or placing a page.
- The Attendant can override a station using the Camp-On feature.
- If the Stop Camp-on Tone is enabled, the Camp-On tone will not sound.

ADMIN PROGRAMMING

Enable Stop Camp-on Tone

Stop Camp-on Tone -- if value is set to ON, Camp on Tone is not heard.	PGM 112 + FLEX 15 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Enable Voice-Over (including SLT)

Voice Over -- if value is set to ON, the busy Station can talk alternately between two calling or called parties.	PGM 113 + FLEX 6 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

OPERATION / SETUP

To activate Camp-on when an Intercom busy tone is heard:

Press * or the last digit of the busy station.

-or-

Press the busy DSS flex button.

-or-

Press the flex button assigned as {Camp-On}.

To answer a Camp-on call when receiving the Intercom busy tone:

1. When Camp-on tone sounds, press [HOLD/SAVE].
   The active CO line is placed on Exclusive Hold (see "Hold" on page 1-184), and the camped-on call is connected.
2. Press [HOLD/SAVE] to toggle between parties.

To activate Camp-On on an SLT when receiving a busy tone:

1. Go Off-hook, then press *, or enter last digit of the dialed station number.
2. When answered, announce the call for a supervised transfer
   -or-
   When answered, hang up without announcing the call for a blind transfer.

To answer Camp-On on an SLT:

1. When Camp-on tone sounds, perform a hook-flash, then enter 560.
   The SLT station will connect to the camped-on call.
2. Perform a hook-flash, then press 56 again, to connect to the original station call.

To assign the {Camp-On} button as a flex button:

1. Press [TRANS/PGM], then press the flex button to be assigned to {Camp-On}.
2. Press [TRANS/ PGM], then press 85.
3. Press [HOLD/SAVE] to save the setting.

Chime Bell

A flex button can be set up to activate a time chime bell from one station to another. When the "Chime Bell Activate" (master) station presses the Chime Bell flex button, the "Chime Bell Receive" (slave) station sounds the "chime".

CONDITIONS

- The chime stops when the Chime Bell Timer expires.
- A response cannot be made to a Chime Bell.
- If the "Chime Bell Receive" station is busy or off-hook, a "mute" ring sounds instead.
- The master station and slave station should both be phones (vs. DSS Console, etc.).

ADMIN PROGRAMMING

Set Up Chime Bell Station Pair

Chime Bell Station Pair -- the first station is a Chime Bell Activate Station, and the second station is a Chime Bell Receiver Station.	PGM 184 + FLEX 1 + Bin number (Value) + Station Pair + [HOLD/SAVE]	VALUES -- Range = 01-14

Set Chime Bell Relay

Chime Bell Relay -- if the Chime Bell Relay is assigned, the external relay makes the signal at the same time like a Loud Bell Control.	PGM 184 + FLEX 2 + Bin number (Value, 2 digits) + Relay number (1-4, 1 digit) + [HOLD/SAVE]	VALUES -- Range = 01-14

Set Chime Bell Timer

Bell Timer -- the Chime Bell Receiver Station receives Chime bell ring until this timer expires.	PGM 184 + FLEX 3 + 02 (Value, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20 secs

Set Chime Bell Frequency

Bell Frequency -- the Chime Bell Frequency can be adjusted by this feature.	PGM 184 + FLEX 4 + FLEX 1-FLEX 2 + Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20

OPERATION / SETUP

To program a flex button as the "Chime Bell button":

1. Press [TRANS/PGM] and the flex button to be assigned.
2. Press [TRANS/PGM], then *9.
3. Press [HOLD/SAVE] to save the setting.

To activate the Chime Bell:

Press the Chime Bell button at the Chime Bell Activate station.

CLI Display - SLT Feature

The SBX IP System supports the following CLI protocol specifications:

- Bellcore GR-30-CORE & SR-TSV-002476 & ETSI ETS 300 659, ETSI ETS 300 778
- Denmark, TDK-TS 900 216
- Sweden, Telecom specification 8211-A112, Standard SS 63 63 25
- India DTMF, TEC Standard No. S/ASF-01/02
- Brazil DTMF, 220-250-713 (STANDARD) Issue 01, November 1993

CONDITIONS

- For a CLI display on a single line telephone (SLT), a Ring Phase more than 4 seconds is recommended.
- If the ring phase is less than 4 seconds, some of the SLTs will not receive CLI display signal.

ADMIN PROGRAMMING

Set CO CID ATTR (Attribute)

CID Mode Select -- the User can select the CID type.	PGM 147 + FLEX 1 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = FSK mode 2 = DTMF CID 3 = Russia CID 4 = Russia CID (Auto)
CID Name Display -- the Analog CO Line CLI carries the caller's telephone number and name.	PGM 147 + FLEX 2 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Telephone No. 1 = Name & Tel No.

Set/Change Ring Phase

SLT Ring Phase Timer -- designates the ring phase or cadence (ex., 5 sec: 1 Sec On / 4 secs Off).	PGM 182 + FLEX 4 + 5 Value (10 msec, 1 digit) + [HOLD/SAVE]	VALUES -- Range = 2-5

OPERATION / SETUP

When an incoming CO call is received at a CO line board, the CID signal is automatically detected by the DSP MBU, then CLI information is distributed to the designated station.

CO Line Preset Forward

This feature allows a CO line call to ring at multiple stations and forward to a pre-determined destination. The destination can be a Station (EKT-SLT), Voice Mailbox, VMIB prompt, UCD group, or Hunt group. Each CO line has a Preset Forward Timer. Each CO line also has a VMID field to allow sending of specific VM digits when a CO line forwards to a VM group.

CONDITIONS

- CO Preset Forward applies to analog loop start CO lines only.
- CO Line Preset Forward will not occur if initial call rings to a group (e.g., UCD, external VM group, or Hunt group).
- When a CO line is set to Preset Forward, a station will not ring if the station is assigned to a Hunt group.
- CO Line Preset Forward feature overrides All Call forwarding feature (station forwarding and Station Preset Call Forwarding).

ADMIN PROGRAMMING

Set Preset Forward Timer

Preset Forward Timer -- designates the amount of time allowed before a call is forwarded to a preset destination. If timer is set to 0, Preset Forward is not available.	PGM 141 + FLEX 13 + Value + [HOLD/SAVE]	VALUES -- Range = 00-99 secs

Select Preset Forward Destination

Preset Forward Destination -- if the destination type is set to this value, a CO line call will be forwarded to the destination selected after the timer expires (when setting is higher than "0").	PGM 141 + FLEX 14 + Value + [HOLD/SAVE]	VALUES -- Destination Type: 1 = Station 2 = StationVoice Mailbox 3 = Hunt Group (620-629) 4 = VMIB Announcement (01-70)

Assign Preset Forward VMID

Preset Forward VMID -- this field allows specific VM digits to be sent when a CO line forwards a call to a VM group.	PGM 141 + FLEX 15 + Value (4 digits) + [HOLD/SAVE]	VALUES -- 0000-9999

Company Directory

This feature allows a caller reaching the Caller Controlled Routing (CCR) menu to utilize the phone keypad to "spell" the name of a subscriber, then be directed to their extension.

CONDITIONS

- The station user name can be programmed by the station user, therefore, it does not affect the searchable name directory.
- The first name and last name fields will contain a maximum of 12 characters each.
- To record a VMIB Subscriber Name prompt, use 6* in station programming.

ADMIN PROGRAMMING

Enter First Names in VMIB

Company Directory First Name -- used with the Company Directory feature.	PGM 110 + FLEX 3 + (First Name) + [HOLD/SAVE]	VALUES -- max. 12 chars.

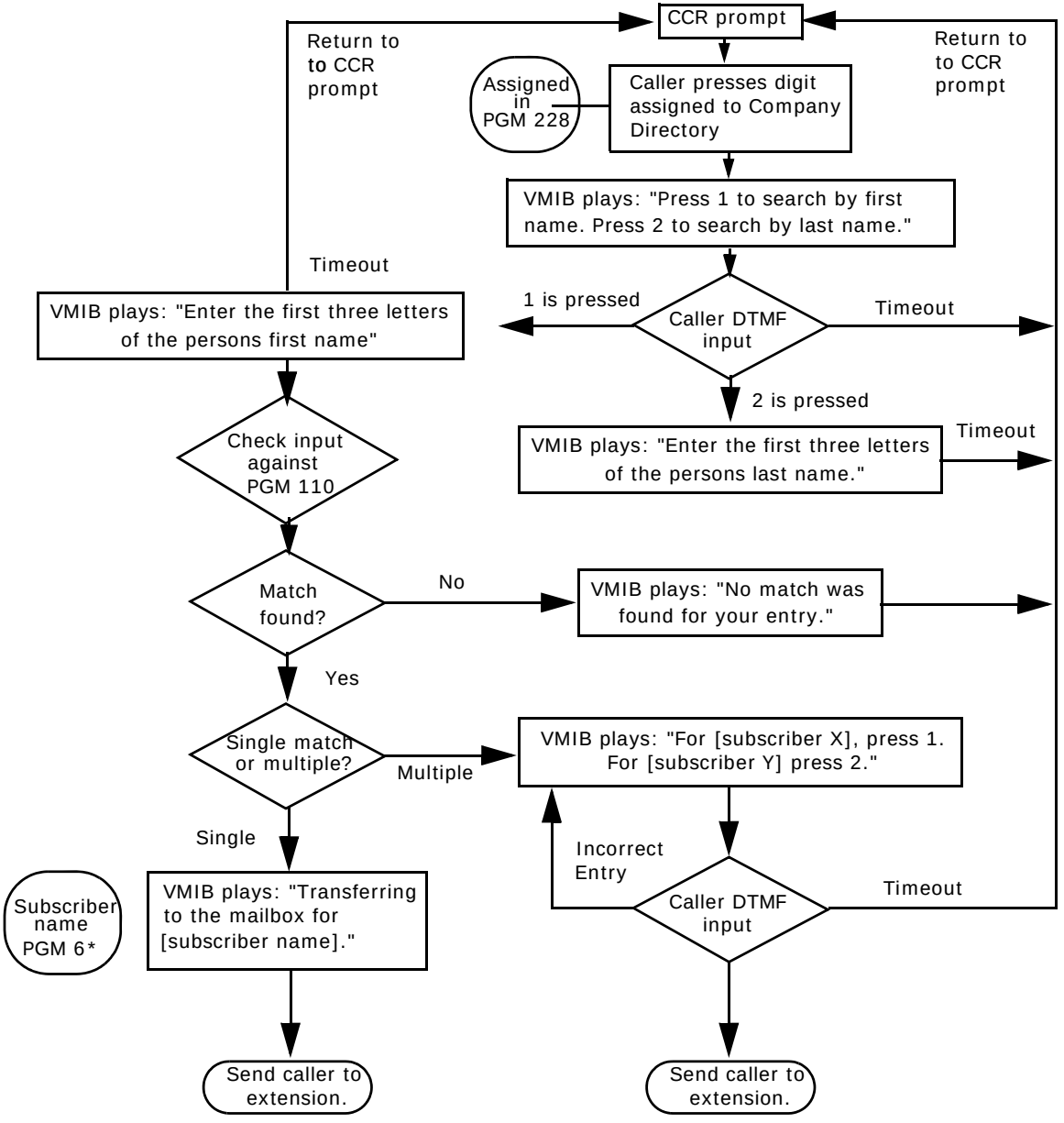
Enter Last Names in VMIB

Company Directory Last Name -- used with the Company Directory feature.	PGM 110 + FLEX 4 + (Last Name) + [HOLD/SAVE	VALUES -- max. 12 chars.

Setup Company Directory

Company Directory Request-- if the CCR destination type is set to this value, the call will be routed to the company directory.	PGM 228, CCR option 12	VALUES -- Default = Off

Company Directory Flow Diagram


CCR prompt
Return to to CCR prompt
Return to to CCR prompt
Assigned in PGM 228
Caller presses digit assigned to Company Directory
VMIB plays: "Press 1 to search by first name. Press 2 to search by last name."
Timeout
VMIB plays: "Enter the first three letters of the persons first name"
1 is pressed
Caller DTMF input
Timeout
2 is pressed
VMIB plays: "Enter the first three letters of the persons last name."
Timeout
Check input against PGM 110
Match found?
No
VMIB plays: "No match was found for your entry."
Yes
Single match or multiple?
Multiple
VMIB plays: "For [subscriber X], press 1. For [subscriber Y] press 2."
Single
Incorrect Entry
Caller DTMF input
Timeout
Subscriber name PGM 6*
VMIB plays: "Transferring to the mailbox for [subscriber name]."
Send caller to extension.
Send caller to extension.

OPERATION / SETUP

When an outside caller presses the programmed CCR digit, the system will prompt the caller "Press 1 to search by first name", "Press 2 to search by last name". Once a 1 or 2 is pressed, the caller will be prompted to "Enter the first 3 characters of the persons first/last name".

Once the three characters have been entered, the system will check the entered characters for a match to the names programmed in the system (see ADMIN PROGRAMMING).

If a match is found, the system will play "transferring to [programmed name]" and transfer the call to the station.

If more than one match is found, the system will prompt the caller:

- "for [subscriber X], press 1"
- "for [subscriber Y], press 2"

When the caller enters the appropriate digit, the system will route the caller to that associated station.

Data Line Security

Once Data Line Security is enabled on a station, communication between the station and another party is protected from interfering signals such as overrides and Camp-Ons to the station.

NOTE: This feature should primarily be used for modems and fax stations.

CONDITIONS

- If an SLT station (for Data, Fax, Modem) had data line security enabled, then makes an external call (via ISDN line), the "3.1KHz Setup" message will be sent to an ISDN CO line instead of the speech setup message.
- If a busy station with data line security enabled receives an incoming CO call, the call is disconnected regardless of the DID/DISA destination setting.

ADMIN PROGRAMMING

Enable Data Line Security

Data Line Security -- if value is set to ON, Override and Camp-on from other stations are prohibited when this station is busy.	PGM 111 + FLEX 4 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Dialing Security

This feature allows you to program a speed dial number that prevent the calling number from being displayed on the LCD of the phone being dialed.

CONDITIONS

- Dialed phone numbers using a Dialing Security number are included in SMDR information.
- This feature applies to transferred, recalled, and re-dialed CO calls.

OPERATION / SETUP

To program a speed dial number with security dialing:

NOTE: Speed dial starting with * is operated with dialing security.

1. Press [TRANS/PGM], then press [SPEED].
2. Enter a speed dial bin number, then press *.
3. Enter the speed number.
4. Press [HOLD/SAVE] to store the speed dial entry.

To activate a speed dial with security dialing:

Press [SPEED], then enter the Speed Dial bin number that was programmed with dialing security (see above).

Distinctive Ring Tone

The Ring Tone signal used to notify stations of incoming calls can be set to provide distinctive ringing on a per CO line basis. A distinctive ring tone can be programmed for each CO line that is used to ring each station.

ADMIN PROGRAMMING

Set CO Distinct Ring

CO Distinct Ring -- if this value is not set to 0, the designated ring tone is heard at the Station when it receives an incoming CO call, so that the user can distinguish incoming CO calls and ICM calls with the different ring tones.	PGM 142 + FLEX 5 + 0 (Value) + [HOLD/SAVE]	VALUES -- Range 0-4 PGM 422

Set Ring Frequency

Use PGM 422 … see Nation Specific settings on page 1-243.

Do Not Disturb (DND)

Do Not Disturb (DND) prevents your phone from ringing (from incoming CO, intercom, transferred calls and paging announcements). However, callbacks from calls left on Hold, Park, and Camp-On will still ring the DND enabled phone. Stations in DND can continue to make normal outgoing calls.

NOTE: By default, DND is available at all stations.

CONDITIONS

- Do Not Disturb can be enabled/disabled while during a call interrupting the conversation. However, if One-time DND is enabled, the DND mode will be deactivated when the call is ended.
- If DND is enabled while a phone is ringing, the call is transferred to the stations pre-set Forward destination, unless the user of the called station is member of a Hunt Group. If a call comes in to a DND enabled station within a Hunt Group, the call will continue to ring the other phones in the hunt group.
- Pressing the [DND/FWD] during call forward or while a pre-selected message is active, will not activate DND. Instead, call forward or the pre-selected message is released.
- An Attendant can override a station in DND mode by using Attendant Intrusion (see 1-8) or Camp-on (see 1-38).
- An Attendant may cancel DND for one or all stations.
- Also see:
  - "Do Not Disturb (DND) Forward to Voice Mail" on page 1-48
  - "Do Not Disturb (One Time DND)" on page 1-48
  - "Do Not Disturb (DND) with Pre-Selected Message" on page 1-49
  - "Do Not Disturb (DND) with Network Calls" on page A-10.

ADMIN PROGRAMMING

Enable/Disable Do-Not-Disturb

DND -- if this value is set to ON, it allows the station to use DND. The station user presses the DND button on the phone to turn DND on/off.	PGM 111 + FLEX 3 + 0 (Off) + [HOLD/SAVE	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To activate/deactivate DND on a digital phone:

Press [DND/FWD].

Do Not Disturb (DND) Forward to Voice Mail

This feature modifies the operation of calls presented to a station in the DND condition (see 1-47) by allowing calls coming into a station with DND enable to be forwarded to voice mail.

CONDITIONS

- When the DND forward destination is enabled, a greeting must be recorded. Otherwise, the system will not forward calls to the associated voice mailbox. Calls forwarded to a voice mailbox with no greeting recorded will be forwarded to the Attendant.
- When DND forward is enabled, incoming CO calls should not be dropped.
- The default forward setting is "enabled".
- Also see "Do Not Disturb (One Time DND)" on page 1-48, and "Do Not Disturb (DND) with Pre-Selected Message" on page 1-49.

ADMIN PROGRAMMING

Enable/Disable DND Forward to Voice Mail

DND Forward to Voice Mail -- when an internal or external call is presented to a station in DND, the system will check a programmable parameter and then send the call to the appropriate destination.	PGM 113 + FLEX 19 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On (default)

OPERATION / SETUP

When an internal or external call is presented to a station in DND, the system will check the pre-programmed destination (see ADMIN PROGRAMMING), then send the call to that destination.

Do Not Disturb (One Time DND)

This feature allows a station user to turn off muted ringing that can occur when the user is on a call (either external or internal). During the call, the user can temporarily activate the DND mode, preventing any chance of muted ringing. When the user ends the call (by hanging up or pressing [SPEAKER], the DND setting is deactivated.

CONDITIONS

- When the call ends and the station becomes idle, the DND setting is deactivated.
- Also see "Do Not Disturb (DND) Forward to Voice Mail" on page 1-48, and "Do Not Disturb (DND) with Pre-Selected Message" on page 1-49.

ADMIN PROGRAMMING

Enable One-Time Do-Not-Disturb

Use PGM 111, then FLEX 3 … see page 1-47.

OPERATION / SETUP

To activate One-time DND on a digital phone:

While on a call, press [DND/FWD]. The [DND/FWD] LED lights.

Do Not Disturb (DND) with Pre-Selected Message

A station can be programmed with a pre-selected message that will show up on the calling party's display.

CONDITIONS

- When [P-MSG DND] Admin is enabled for a station:
- Both internal and external calls are handled as if the station is in DND.
- When in DND mode, the called station does NOT receive any rings for incoming calls. An internal caller hears a busy tone, and the pre-selected message appears on the caller's display.
- A external caller will hear a busy tone and see a busy message on their display (if available).
- When [P-MSG DND] is disabled, the station being called receives an incoming call ring. The caller hears ring-back tone.
- For DISA CO calls, an external user will hear a "Do not disturb" voice message telling him/her to try again later.
- This feature cannot be used when the CO direct Ring Assign feature to station is enabled.

ADMIN PROGRAMMING

Enable P-MSG DND

P-MSG DND -- if this value is set to ON, it allows the station to use the preselected message feature.The station user must then turn the feature on/or at the station.	PGM 113 + FLEX 16 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Disable Ring Assign

Use PGM 144 … see page 1-13.

Emergency Intrusion

If a station with this feature enabled calls a busy station, the caller can use this intrusion method to break into the called station's conversation.

CONDITIONS

- An Emergency Intrusion call is only possible when the feature has been enabled on the calling station (see ADMIN PROGRAMMING).
- If the busy station is on a CO line call, the call is disconnected when Emergency Intrusion is made.
- The busy station is connected to the Emergency supervisor after a short beep tone indication.
- An Emergency Intrusion can not be used on a station that is:
  - in the DND mode
  - an Attendant station
  - a Network DSS
- An Emergency Intrusion is connected to:
  - the Master station of a "linked pair" if both the Master and Slave are busy (see "Linked Pair Stations" on page 1-145).
  - the Secretary Station instead of Executive station.
- Also see " Attendant Intrusion" on page 1-8 and "Forced Trunk Disconnect" on page 1-57.

ADMIN PROGRAMMING

Enable a Station as an Emergency Supervisor

Emergency Supervisor -- if value is set to ON, this station can make an emergency intrusion to another station.	PGM 112 + FLEX 24 + 0 (Off) + [HOLD/SAVE]	VALUES - 0 = Off 1 = On

OPERATION / SETUP

To activate Emergency Intrusion:

At a busy tone, enter the appropriate Emergency Intrusion code, then press # to immediately connect user of the called station.

Extend CO-to-CO Connection

When a call is made between two analog CO lines using DISA or off-net call forward, the call duration is limited by the Unsupervised Conference Timer. After the Unsupervised Conference Timer expires, the system drops the call. The Extend CO-to-CO Connection can be used to extend the unsupervised conference time.

CONDITIONS

- If this feature is activated, the DTMF receiver device is assigned to caller-side CO lines.
- At least one IDLE DTMF device must exist.
- This feature is only available on analog CO-to-CO calls using DISA or off-net call forward.
- When the CO-to-CO feature is activated, the two analog CO lines involved in the conversation will hear a warning tone 15 seconds before the unsupervised conference timer expires and the call is disconnected.

ADMIN PROGRAMMING

Enable Unsupervised Conference Timer Extend

CO - CO Unsupervised Conference Timer Extend -- if value is set to ON, the conference call user can extend the Unsupervised Conference Timer by dialing the UC Timer Extend Code.	PGM 160 + FLEX 18 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Unsupervised Conference Timer Extend Code

Unsupervised Conf Timr Extend Code -- if value is set to ON, the conference member can extend the Unsupervised Conference Time by dialing the Uunsupervised Conference TIMER EXTEND Code.	PGM 109 + FLEX 6	VALUES -- Set 1, 2, 6, 7, and 8 = ## Set 3, 4, and 5 = *##

Set Unsupervised Conference Timer

Use PGM 182, then FLEX 6 … see page 1-87.

OPERATION / SETUP

To extend call duration:

- The unsupervised conference timer extension code number, and the extension time digit (1-9) must be entered using Admin Programming.
- Once that information is entered, the system will re-assign the unsupervised conference timer to equal the multiple of the entered digits (EX - if the unsupervised conference timer is set to 10 mins, and the multiple digit is 3, then the timer will be extended to 30 mins).

Flash

There are two Flash types available on the SBX IP:

- **CO Flash** - Provides station users with the ability to terminate or transfer an outside call or transfer a call without hanging up. The flash type and duration of each CO line are assigned by the system.
- **Flash on ICM Call** - This feature enables station users to utilize the [FLASH] button for disconnecting pages and intercom calls.

CONDITIONS

- The Flash command is not activated on ISDN CO lines.
- A [FLASH] softkey button is located on each 24-button digital phone.
- A station that is not permitted to access CO line cannot initiate a flash.
- During a flash, the LED of the CO line will flash.
- Also, refer to the SBX IP Installation Manual.

ADMIN PROGRAMMING

Set Flash Command to CO Line Code

Use PGM 106, then FLEX 8 … for details, see the *SBX IP Installation* manual.

Set Flash Type

Flash Type Analog CO Lines -- designates the type of Flash that is used.	PGM 141 + FLEX 7 + 0 (Loop) + [HOLD/SAVE	VALUES -- 0 = Loop 1 = Ground

Set CO Flash Timer

CO Flash Timer -- designates the length of time limit for CO Flash. CO Flashing is available within this timer; otherwise, the CO Line is released.	PGM 142 + FLEX 12 + 050 (100 msec) + [HOLD/SAVE]	VALUES -- Range = 000-300

Set SLT Hook-switch Bounce Timer

SLT Hook Switch Bounce Timer (SLT only) -- designates the length of time needed to detect a valid on- or off-hook state.	PGM 182 + FLEX 1 + 01 Value (100 msec, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-25

Set SLT Maximum Hook-switch Flash Timer

SLT Maximum Hook Flash Timer (SLT only) -- designates how long the User needs to press the hook switch to register a FLASH (Timed-Break Recall).	PGM 182 + FLEX 2 + 050 Value (10 msec, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 001-250

Set SLT Minimum Hook-switch Flash Timer

SLT Minimum Hook Flash Timer (SLT only) -- used to designate the minimum time for the system to register a hook flash.	PGM 182 + FLEX 3 + 020 Value (10 msec, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-250

OPERATION / SETUP

To perform a Flash from a digital phone while on a CO line call:

Press the [FLASH] softkey button.

To generate a flash from an SLT while on a CO line call:

Press the hook-switch lightly, then enter 551.

Flex Buttons

Flex (flexible) buttons are customizable buttons used for a variety of functions. They are programmable via either Admin or station programming. Flex button can be programmed for the following functions:

- CO Line - Automatically accesses the assigned line.+
- DSS/BLF - Automatically indicates assigned stations and provides BLF for off-hook and DND. +
- Flexible Numbering Plan Code - Any feature with a dialing code (Paging, Account code, Call Park, etc.) can be assigned to a flex button.+
- Speed Dial - Automatically dials Speed Dial Numbers (that is, System, Station, Saved Number Redial, Last Number Redial).+
- Group Access - Hunt Group pilot number.+
- Pool Group Access - Because some or all outside lines can be grouped, this flex button allows access to the highest numbered unused CO line in a group.+
- Loop - Used to answer a transferred call on a line for which a user does not have a button already assigned.+
- Station Assignment - Allows assignment of stations, and complete flexibility within the system numbering plan. A station can be assigned a 3-digit number from 100 to 399.

- 4/8 button - Feature code assign.
- Telephone Number - Automatically dials an outside phone number (7208D/7224D digital phones only)

CONDITIONS

- A flex button that is not assigned as a CO line button is considered a "feature" button, and is programmable at each user station.
- When CO Line Programming (see ADMIN PROGRAMMING) is enabled, the flex button that is assigned as a CO line button can be programmed.

[+]This flex button can be programmed at a user station.

ADMIN PROGRAMMING

Assign Flex Buttons

Enter the appropriate station range.

Flex Button Assignment -- each flexible button of a station can be assigned as desired (refer to Table).	PGM 115 + 1 + FLEX 1 + 03 (Type No., Range = 01-11) + 02 (Group Number) + [HOLD/SAVE]	VALUES -- 1 = F01-F24 2 = F25-F48

BUTTON TYPE FOR FLEXIBLE BUTTON ASSIGNMENT

NO.	TYPE	RANGE
1	User Key	User can program by button programming procedure. (empty)
2	{CO xx} Button	CO Line 01-12
3	{CO Grp xx}	CO Line Group 01-24
4	{LOOP}	--
5	{STAxxx}	Station No.100-131
6	STA PGM Button	11-99
7	{STA SPDxx}	Station Speed Bin00-99
8	{SYS SPDxxxx}	System Speed Bin 2000-2499
9	Flex Num	Num Plan Code (Admin 106 & 107)
10	Net DSS Button	When using Networking feature
11	MSN Button	MSN Number - n/a

DEFAULT BUTTON CONFIGURATION

FLEX	24-BUTTON DIGITAL)	8-BUTTON (DIGITAL)
1	{CO 1}	{DND}
2	{CO 2}	{Call Back}
3	{CO 3}	{CO1}
4	{CO 4}	{CO2}
5	{CO 5}	{CO3}
6	{CO 7}	{CO4}
7	{LOOP}	{LOOP}
8	empty	{POOL 01}
9	empty	n/a
10	empty	n/a
11	empty	n/a
12	empty	n/a
13	station 100	n/a
14	station 101	n/a
15	station 102	n/a
16	station 103	n/a
17	station 104	n/a
18	station 105	n/a
19	station 106	n/a
20	station 107	n/a
21	station 108	n/a
22	station 109	n/a
23	station 110	n/a
24	station 111	n/a

Program CO Line

CO PGM -- if value is set to ON, the station user can program a CO button to one of the available flexible buttons.	PGM 112 + FLEX 6 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

OPERATION / SETUP

Refer to the ADMIN PROGRAMMING

To assign a flex button at a user station:

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Press [TRANS/PGM], then enter the Feature Code.
3. Press [HOLD/SAVE] to store changes.

To assign a CO or DSS button (direct) button:

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Enter the appropriate Code.
3. Press [HOLD/SAVE] to store the setting.

To assign a Telephone Number (7208D/7224D digital phone only):

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Press the [TEL NUM] soft button.
3. Enter the appropriate telephone number.
4. Press [HOLD/SAVE] to store the setting.

Forced Hands-Free Mode

A caller using a digital phone can temporarily change the answering mode of the called party digital phone (that is from tone mode to hands free mode).

CONDITIONS

- If the digital phone is changed to Hands-Free mode, the connection tone will be provided, and the voice path is connected.
- The answer mode of a called station cannot be changed if:
  - the called station's digital phone is set to a linked-pair station.
  - the called station's phone is set as a Mobile-Ext.
- If the calling station's digital phone is set as a linked-pair station, the calling station's digital phone CAN use the forced hands free mode.
- Only the calling station's digital phone must have Forced Hands-Free Mode enabled in order to use this feature.
- After connection, any Hands-Free mode related features are not available (ex. CallBack).

ADMIN PROGRAMMING

Enable Forced Hands-Free Mode

Forced Hands Free -- if this value is set to ON, the station can force the called party station to use the hands-free mode when it is ringing.	PGM 111 + FLEX 19 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To activate forced hands free mode during a tone mode call:

When you hear a ring back tone, enter the forced hands free code number.

The called station will stop ringing, and the speaker and microphone will be activated (that is, they will operate in Hands-Free mode).

Forced Trunk Disconnect

This feature allows an authorized user (Emergency Supervisor) to disconnect another station's active outside call in order to use that line to make outgoing call.

IMPORTANT: This feature is only available for analog lines. In addition, this feature should only be used in an emergency when no other line is available. Because this is an "emergency only" feature, only an authorized user should/can use it.

CONDITIONS

- The calling station must have Emergency Supervisor enabled.
- Also see "Emergency Intrusion" on page 1-50.

ADMIN PROGRAMMING

Enable Emergency Supervisor

Use PGM 112, then FLEX 24 … see page 1-57.

OPERATION / SETUP

To activate the Forced Trunk Disconnect feature:

When you attempt to access an outside line, but hear a busy tone, enter the "Forced Trunk Disconnect" code, then press #.

The busy line goes to idle and you hear a dial tone.

Headset

An industry-standard headset can be connected to a station (instead of using the handset or speaker).

CONDITIONS

- The intercom signaling mode (HF/TN/PV - [TRANS/PGM] + 1 + 2) can be set in Headset and speaker mode.
- In Headset mode, the User can select an incoming ring mode to hear ringing with the speaker, headset, or both by Admin programming.
- The station will receive paging with the station speaker.
- To answer an intercom call in Tone mode, the User should press [SPEAKER].
- When an intercom call is received in Privacy mode, the station will be muted automatically. User should press [MUTE] to answer the intercom call.

ADMIN PROGRAMMING

Set Headset Ring Mode

Speaker Ring -- determines if an incoming call will ring to the speaker, the handset, or both.	PGM 111 + FLEX 10 + 1 (Speaker) + [HOLD/SAVE]	VALUES -- 1 = Speaker (S) 2 = Headset (H) 3 = Both (B)

Change between Speaker/Headset

Speakerphone -- if value is set to ON, the speakerphone can be used.	PGM 111 + FLEX 11 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To change the station from Speaker Mode or Headset:

1. Press [TRANS/PGM], then enter 76 (current answer mode will appear on the display).
2. Press 1 (Speaker mode) or 0 (Headset mode).

To change the Headset Ring mode:

1. Press [TRANS/PGM], then enter 75 (current answer mode will appear on the display).
2. Press one of the following:
   1 = Speaker ring only 2 = Headset only 3 = Both

Hot Desk

Allows users to share a 24-button digital phone with others while maintaining their own settings and log in information. The station used for Hot Desk purposes may also be referred to as a "Dummy Station". For example, a Hot Desk can be used in a call center or marketing department where people on different shifts share a working place with one another.

IMPORTANT: Available for digital and IP phones only.

CONDITIONS

- Each user must log out when they are no longer using the station so that it will be available to users who share the station.
- A dummy station will display "DUMMY STATION (xxx)" (where xxx = the physical station number).
- A dummy station only allows login operation; all other operations are not allowed.
- Logout operation is only allowed for dummy stations where a user has logged-in.
- Total number of users is limited by the system station capacity. The total number of Hot Desk users cannot be greater than the total number of stations. Furthermore, the number of Hot Desk users must be one station less than the number of installed stations (for example, if there are 12 stations installed, there can only be 11 Hot Desk users).
- Each Hot Desk user must have his/her own password.
- Saved database information for each user includes:
  - Station Number
  - Station Attributes
  - CO Routing (Ring Assign, DID routing)
  - Hunt Group Membership
  - Voice Mail
- If a user attempts to log in at another station without logging out of another Hot Desk station, the previously used station automatically returns to the "dummy state".
- The Hot Desk automatically logs off if there is no activity at the digital phone within the Auto Log Out Timer (see ADMIN PROGRAMMING).
- The button map of the Hot Desk will not be changed even when a user logs on to a different type of digital phone. However, it is recommended that the same type of digital phone is used for the Hot Desk station.
- Only 24-button digital phones can be used as dummy stations.
- A modem should not be associated with a dummy station.
- If a system reset occurs, any users currently logged in will be automatically logged out.

ADMIN PROGRAMMING

In this area of programming you can change Hot Desk Agent Number and Auto Logout Timer. The View Agent Range only displays the assigned range of station numbers

Enable/Disable a Dummy Station

Dummy Station -- if value is set to ON, this Station can be used as a dummy station and a hot-desk agent can login at that location.	PGM 112 + FLEX 23 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Number of Agents

Hot Desk Agent No. -- this assigns Hot Desk Agent numbers.	PGM 250+ FLEX 1 + Value + [HOLD/SAVE]	VALUES -- 000 - End Station

Assign Station Number of Agents

View Agent Range -- displays the assigned range of Hot Desk Agent numbers.	PGM 250 + FLEX 2	VALUES --

Set Agent Auto Logout Timer

Auto Logout Timer -- assigns the time for automatic logout for the assigned Hot Desk Agent numbers.	PGM 250 + FLEX 3 + Value + [HOLD/SAVE]	VALUES -- Range = 00-24 hour

Access Station Attributes

Use PGM 111 to 124 … see Quick Reference chapter on page D-6 thru page D-10.

OPERATION / SETUP

To activate Hot Desk operation at a dummy station:

1. Go off-hook.
2. Enter the authorization code, then press #.
3. The station restores the designated user's database (station number, COS, ring assign, etc.), and is ready to receive incoming calls.

To logout of the Hot Desk:

1. Press [PGM].
2. Enter the appropriate user logout code, or press the programmed [Agent Logout] flex button.
3. Select the call forward type (refer to values) using the volume up/down buttons.
   Off-net speed 000
   Mobile extension
   VMIB
   VM group
4. Press [HOLD/SAVE] to save the current settings.
   The User database is saved, and the station returns to the "dummy state".

In-Room Indication

CONDITIONS

- A maximum of ten groups can be programmed with this feature. Each group can have a maximum of twenty members plus the supervisor (for a total of twenty-one).
- The Supervisor station must be idle in order for the In-Room Indication flex button to be used.
- If a station that is not a Supervisor station presses the In-Room Indication button, an error tone is sounded.
- If [HOLD/SAVE] is not pressed within 5 seconds after the In-Room Indication button is pressed, the station returns to the idle state.

ADMIN PROGRAMMING

Enable Station as In-Room Indication Supervisor

In-room Indication Supervisor -- a supervisor can press an In-room Indication button and the [HOLD/SAVE] button at idle state. This causes the LED of In-Room Indication buttons of all members to be turned ON. - 10 bins can be programmed; each bin can have up to 20 members, excluding the Supervisor.	Enter bin number (01-10), then follow this procedure: PGM 183 + FLEX 1 + Station Number + [HOLD/SAVE]	VALUES -- On/Off

Add In-Room Indication Member

In-room Indication Member -- each member can see the status of the In-room Indication button according to the supervisor.	PGM 183 + FLEX 2 + Station Range + [HOLD/SAVE]	VALUES --

OPERATION / SETUP

To program a flex button as the "In-Room Indication" button:

1. Press [TRANS/PGM], then the flex button to be assigned.
2. Press [TRANS/PGM], then press *8.
3. Press [HOLD/SAVE] to store the setting.

To Activate or Deactivate the In-Room Indication button:

1. Be sure that Supervisor station is the idle state, and that an In-Room Indication button is programmed.
2. Press the In-Room Indication button and press [HOLD/SAVE].

Intercom Signal Mode (HF/TN/PV)

Users can control the method by which they receive intercom calls and signals. Stations equipped with a speaker mode can select one of the available three signaling modes:

- **HF (Hands-Free Mode)** - When the user hears three bursts of tone, and an announcement. they can reply handsfree (using the mic and speaker) or lift the handset. The calling party can then hear any conversation in progress at the called station.
- **Tone Mode (default)** - When the user hears repeated bursts of intercom ring tone, and the HOLD button slow flashes, they can lift the handset or press [SPEAKER] to answer a call.
- **Private** - You will hear three bursts of tone and a one-way announcement. The calling party cannot hear any conversation in progress until you lift the handset or press [MUTE] to accept the call.

CONDITIONS

- In Message Wait/ICM Queuing/Call Transfer/ Attendant Override, the ring is received as a tone (TN) mode regardless of the assigned Intercom Signal mode.
- The Intercom Signal Mode will not affect the voice announcements from internal or all-call paging.

OPERATION / SETUP

To assign the Intercom Signal mode:

1. Press [TRANS/PGM], then press 12.
   The confirmation tone sounds.
2. Enter the signal mode type (1 = HF, 2 =TN, 3 = PV).
3. Press [HOLD/SAVE] to store the setting.
   A confirmation tone is sounded.

Intercom Tenancy Group

A station can be assigned to any one of the Intercom Tenancy Groups. Each Intercom Tenancy Group can be operated independently, and stations in the group can be assigned an individual CO Group. A maximum of five Intercom Tenancy Groups can be assigned.

Each group can be assigned by the Attendant, and can be programmed to allow or deny calls to other groups. Stations in a Group are allowed access to other stations based on the allowed access of the calling Group.

When a call to another intercom Tenancy Group is allowed, CO line or station calls, as well as pick-up and transfer features are activated.

CONDITIONS

- When a call to another Intercom Tenancy Group is denied, call Pick-Up cannot be activated.
- Stations cannot have the same station numbers, regardless of whether or not they belong to different Intercom Tenancy Groups.
- Any station in the system can be the Attendant of an Intercom Tenancy Group. It is not affected by Intercom Tenancy Group access.
- When the Attendant of an Intercom Tenancy Group sets the Day/Night/Weekend mode, it affects their assigned Intercom Tenancy Group only.

ADMIN PROGRAMMING

Set Intercom Group Number

ICM Group (Intercom Tenancy Group) -- selects the intercom Tenancy Group (1-5), to which this station belongs.	PGM 111 + FLEX 13 + 02 (Group Number) + [HOLD/SAVE]	VALUES -- Range 1-5

Create Intercom Tenancy Group

ICM Tenancy Group Access -- each group can be programmed to allow or deny calls to other groups.	PGM 120 + FLEX 2 + FLEX 1-5 (toggle for ICM Tenancy Group 1-5 + [HOLD/SAVE]	VALUES -- Sub-FLEX 1-5 = each lit button indicates that the ICM Tenancy Group has access to other groups.

Message Wait and Call Back

Message Wait - A station Message Wait request is defined as the Message Wait Indicator (MWI) request left by another station without a voice message. The notified station user can then respond to that request (for example, a message left at the station). When responding to the station, the notified user can answer messages left on the station in sequential order.

Call Back - The Callback button can be used when calling a busy or unanswered station. Once that station becomes idle, the station that left the call back request will be signaled.

CONDITIONS

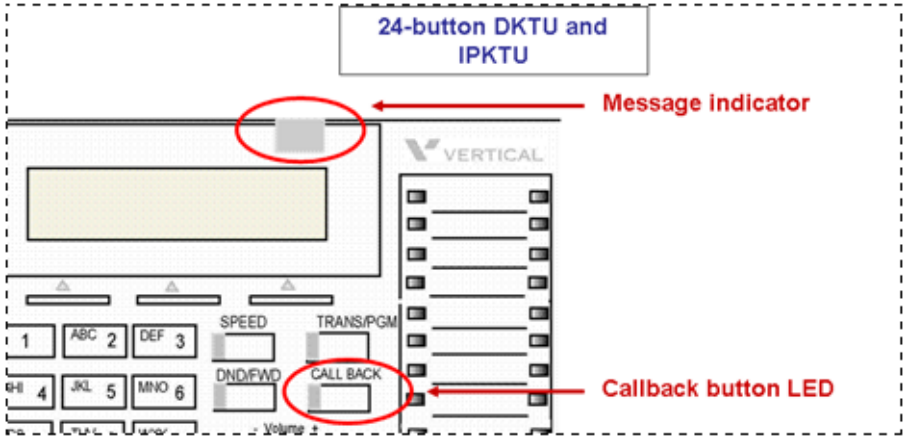
- A station with a message waiting can receive periodic audible reminders of a message waiting. This tone is only sent over the speaker of an idle station.
- A station can leave only one callback or message at a called station. If a new message is left, it will override any previous message.
- A maximum of five stations can leave messages at a single station at a time. When a station attempts to leave a message at a station which has already five messages (and none of those was left by the currently calling station), an error tone sound.

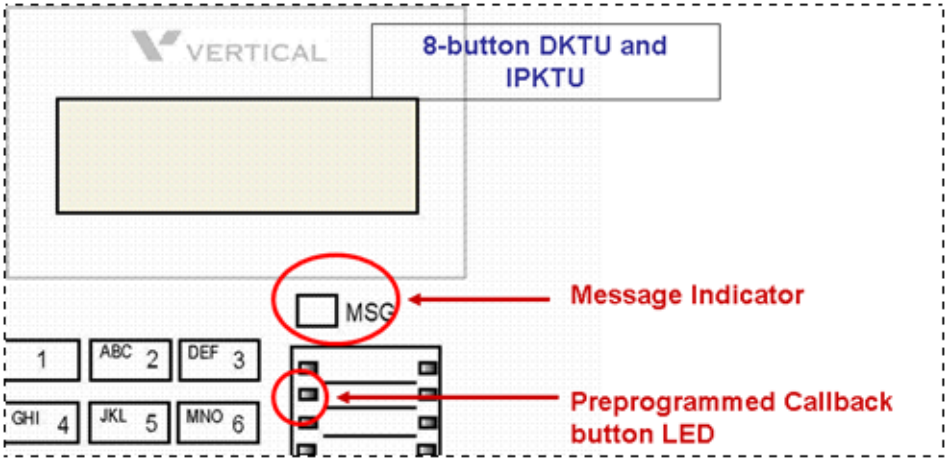
  NOTE: When voice mail access is enabled at a station, after recording a voice mail message, the messages changes to a normal message. In this case, an error tone will not sound.
- Message Wait information is saved even during a power failure.
- When dialing a station number instead of pressing the [CALLBK] button to answer a Message Wait, the message wait will be canceled at the calling station.
- The Message Wait reminder tone is programmable from 00 to 60 minutes (00 =no tone).
- SLT phones must have a Message Wait LED in order for message waits to be sent and received. However, Message Wait LEDs for voice mail notification are not supported.
- Each station may have up to eight hundred Message Waits.
- A Message Wait reminder tone will sound until all the messages are retrieved.
- Also see:
  - "Message Wait Indicator LEDs" on page 1-65.
  - "Message Wait Indicator (MWI) - SLT Feature" on page 1-68.
  - "CLI Message Wait" on page 1-138

Message Wait Indicator LEDs

The Message Wait Indicator allows a user to clearly distinguish whether new, unheard messages, or callback requests, are waiting.

The following diagrams will be used to specify the location of the Message Indicator and Callback button LEDs:





CONDITIONS

- A new message or a voice mail from an external source is recognized in the user's mailbox as a message that has not yet been heard.
- A saved message is defined as a message in the mailbox to which the user has listened, but has not deleted or moved.
- Also see:
  - "Message Wait Indicator LEDs" on page 1-64.
  - "Message Wait Indicator (MWI) - SLT Feature" on page 1-68.
  - "CLI Message Wait" on page 1-138

Ringing vs. Idle MWI LED States for IP and Digital Phones

- Ringing state: The Message Indicator LED flashes at the rate of 1 flash per 500 ms when a new call is received. It continues flashing until the call is answered, forwarded, or abandoned. This occurs regardless of whether or not the mailbox has a message, or whether or not a Call Back request is active on the station.
- Idle State with new messages: When a new message is in the voice mailbox or external VM, the Message Indicator LED and the Callback button (if programmed) flash at the rate of 1 flash per 1000 ms.
- Message Wait LEDs for voice mail notification are not supported.
- Idle State with message wait request and no new voice message: When a station Message Wait request is active on a station, and there is no new or external voice mail messages, the Message Indicator LED is extinguished. The Callback button (if programmed) flashes at the rate of 1 flash per 1000 ms.
- Idle State with no callback request and no new message: When no station message wait request is active on the station and no new message is in the VMIB or external VM, the Message Indicator LED, and the Callback button (if programmed) are extinguished.

Mailbox Buttons

- In the idle state, on any IP (including SoftPhone) or digital phone, when there is an un-played (new) message in the assigned mailbox, all pre-programmed flex buttons assigned as mailbox buttons flash red at the rate of 1 flash per 1000 ms.
- When there is no new, unheard message in the assigned mailbox, the assigned mailbox button is extinguished.
- Also see "Mailbox Buttons" on page C-18.

OPERATION / SETUP

To leave a message wait at an idle station that does not answer or is in DND mode:

Press [CALLBK].

A confirmation tone sounds, and the [CALLBK] LED at the receiving station flashes.

To answer a message wait:

Press the flashing [CALLBK] button.

The station that left the message receives an intercom ring.

To leave a call back at a busy station:

1. Press [CALLBK]. A confirmation tone sounds.
2. Go on-hook.

   When the receiving station hangs up from the current call, the station that left the message receives an intercom ring.
3. When the intercom call is answered, the callback request will be removed.

To leave a Message Wait at an SLT:

1. Perform a hook-flash, then press 556. A confirmation tone sounds
2. Go on-hook.

To answer the message wait:

1. Lift the handset. An indication tone sounds.
2. Press 557.

   The station that left the message receives an intercom ring.

NOTE: If a voice message is recorded on a pulse-type SLT (PGM 110), the recorded message will be played by dialing the message wait retrieval code (557). The played message will be automatically deleted after being played.

When more than one message is recorded, after the first message, a warning tone sounds to indicate that there are remaining messages. To retrieve another message, press 557 again. The Call Back will ring in Tone mode regardless of Intercom Signaling Mode (see 1-62).

To set a Call Back on a busy SLT:

1. When a busy tone is heard, perform a hook-flash, then press 556.
2. Confirmation tone sounds.
3. Go on-hook.

   When the SLT returns to an idle state, the intercom ring is received.

Message Wait Indication (MWI) - SLT Feature

If an SLT station receives a message from another user, the SLT LED flashes.

CONDITIONS

- When lifting the handset, the user will hear a DND warning tone that indicates a message is waiting.
- When a message waiting indication prompt is recorded for system greeting 097, a voice announcement is played instead of the DND warning tone.
- Also see:
  - "Message Wait and Call Back" on page 1-64.
  - "Message Wait Indicator LEDs" on page 1-65.
  - "CLI Message Wait" on page 1-138

ADMIN PROGRAMMING

Set Station ID Assignment

Use PGM 110, then FLEX 1 … see page 1-17.

Messages (Customized Display Text)

A user can select and/or create a message on their display that will appear on the display of any other station (within the system) that calls the user's station. These messages will alert the caller as to the user's status.

There are three categories of messages available to the user of any station within the system:

- Default Pre-Selected (Pre-Programmed) Messages (options 01-10) - see next page

  These are messages that are already included in the system as it arrives to a site from Vertical. They are available to all stations within the system. Some of the existing messages require not only selection, but may require further input such as a time and/or date, alternate phone number, etc.
- Customizable, Pre-Selected Messages (Options 11-20 - see 1-70)

  These messages are those that the System Attendant can create and change as needed (using the Character Entry Chart shown on page D-50). Like the default messages, they are available to all stations within the system.
- Customized Station Messages (Option 00 - see 1-70)

  These are messages that can be created by the user of each station (using the Character Entry Chart shown on page D-50). Any message created by a station user is only available on that specific station. Station messages are NOT available system-wide as the other two message categories are.

CONDITIONS

- If a station assigns call forward while a pre-selected message is activated, the pre-selected message is canceled automatically).
- Users can leave a message at a digital phone or SLT. When leaving a message at an SLT, a DND warning tone will sound when the handset is lifted as a reminder of the message waiting.
- When a pre-selected message is selected in a digital phone, the [DND/FWD] will flash.

ADMIN PROGRAMMING

Enable at Station Level

Use PGM 113, then FLEX 16 … see page 1-49

OPERATION / SETUP

Enabling Messages

To enable/activate a Default Pre-Selected (Pre-Programmed) Message for a station:

1. From the designated station, press [TRANS/PGM], then 51.
2. Enter the 2-digit message code (01-10):
   01= LUNCH, RETURN AT HH:MM
   02 = ON VACATION /RETURN AT DATE MM:DD
   03 = OUT OF OFFICE/RETURN TIME HH:MM
   04 = OUT OF OFFICE/RETURN AT DATE MM:DD
   05 = OUT OF OFFICE/RETURN UNKNOWN
   06 = CALL: (Telephone No: Up to 17 digits)
   07 = IN OFFICE: STA XXXX
   08 = IN A MEETING/RETURN TIME HH:MM
   09 = AT HOME
   10 = AT BRANCH OFFICE

   NOTE: Some of these messages require additional input after selection (for example, if you choose message 03, you need to enter a return time).

   -or-
3. Select System Customized Pre-Programmed Messages (options 11-20 - 1-70)

   -or-
4. Select User Customized Station Messages (options 00 - see 1-70)
5. Press [HOLD/SAVE] to enable and store the setting.
   The [DND/FWD] LED will flash to indicate that the message is enabled.

To disable a Default Pre-Selected (Pre-Programmed) Message for a station:

From the designated station, press the flashing [DND/FWD] LED.

System Customized Pre-Programmed Messages

These messages can be created for use system-wide and can only be set up by the System Administrator.

To create a Customizable Pre-Selected (Pre-Programmed) Message for the system:

1. From the System Attendant Station, press [TRANS/PGM], then press 053.
2. Enter the message number (11-20).
3. Enter the message, up to 24 characters (using the Character Entry Chart shown on page D-50).
4. Press [HOLD/SAVE] to store the message.
   A confirmation tone sounds.

   Hint: See previous page for information on enabling these messages.

User Customized Station Messages

These custom messages can be created by any station user (at their own station only).

To create a Custom Message for a station:

1. Press [TRANS/PGM], then 52.
2. Enter the message, up to 24 characters (see the Character Entry Chart on page D-50).
3. Press [HOLD/SAVE] to store the message.

   Hint: See previous page for information on enabling these messages.

To delete a Custom Message from a station:

1. Press [TRANS/PGM], then 52.
2. Press [HOLD/SAVE] to delete the customized message.

Mobile Extension

This feature allows user to utilize a mobile phone as an extension of the SBX IP system for receiving and making calls.

NOTE: This feature is available on PRI, T1 a nd SIP trunks only.

CONDITIONS

- If the user station is busy, forwarded, or in the DND state, calls will not be routed to the mobile extension.
- When making an external call from a mobile extension, the CLI number of the station itself is sent (not the mobile phone number). However, the mobile extension cannot use the transfer feature.
- After the No-Answer Timer expires, calls are routed to the DID No Answer Destination. The no answer timer of the system is shorter than for the GSM (Global System for Mobile communication).
- This feature applies to ISDN DID Lines, ICM calls, and transferred calls only.
- The Message Wait / Call Back feature is not supported on mobile extensions.
- When on a mobile extension conversation through the system, the DTMF (dual tone multi-frequency) receiver is dedicated to the mobile extension.
- If a mobile user attempts to seize a CO line, dial a Hunt Group another destination except an extension, an error tone sounds.
- If the "Transfer recall" timer expires, calls are not routed back to the extension associated with mobile extension.
- An outgoing call from a mobile extension is restricted by the internal station's COS.
- A mobile extension can receive the Calling Party number or his own extension CLI number as CLI (see ADMIN PROGRAMMING).
- To use the "Transferring call / outgoing call from mobile extension" feature, the CO line connected with the mobile extension should be set to a DID line.
- When a mobile extension calls its own DID number within the system to make a CO call, the system checks the CLI of the mobile extension number. If the CLI matches the "Mobile Extension Number" or "Mobile CLI" registered to that extension, the system provides CO dial tone. It then allows the user to make a CO outgoing call through the system.
- If the extension is a member of a Hunt Group (except Ring Hunt Group), a call is routed to the mobile extension.
- To use the mobile extension as member of Hunt group, appropriate programming must be performed (see ADMIN PROGRAMMING).
- A mobile extension can transfer a call to another station's mobile extension.

- When handling an incoming call through DID, ICM or Transferring call:
  - A call to a station which has the preprogrammed mobile extension is routed to both the station and associated mobile extension.
  - When an incoming call is answered at a station or at a mobile extension, the phone that is not answered in the associated pair will stop ringing.
  - If a mobile extension is answered, the associated station goes into Mobile-Ext In Use State and displays the following: IN USE AT MOBILE EXT.
  - Under the Mobile-Ext In Use State, the station cannot be used for dialing.
  - If another station tries to call a station that is in the Mobile-Ext In Use State, the caller hears a busy tone. In this case, Call Waiting is not supported. However, the caller can leave a Message Wait at the extension (see 1-64).
- Also see "Remote Mobile Extension Control" on page 1-77.

ADMIN PROGRAMMING

Register a Mobile Extension

Activate Mobile Extension -- used to enable mobile extensions.	PGM 236 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set or verify CLI Transit

Use PGM 143, then FLEX 7, then ORI / CFW … see page 1-142.

Program or verify a Hunt Member

Mobile Extension Hunt Call -- if set to ON and a station is a member of Hunt group, then the Hunt call is served to its Mobile extension also.	PGM 236 + FLEX 5 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To register a mobile extension number to a digital phone:

1. Press [TRANS/PGM], then 33.
2. Enter the mobile phone number that is being registered.
3. Press [HOLD/SAVE] to complete the registration.

To activate (deactivate) a mobile extension:

1. Press [TRANS/PGM], then 34.
2. Press 1 (activate) or 0 (deactivate).
3. Press [HOLD/SAVE] to store the setting.

To register the mobile extension CLI number on a digital phone:

1. Press [TRANS/PGM], then 35.
2. Enter the mobile CLI number.
3. Press [HOLD/SAVE] to complete the registration.

To assign a Mobile Extension Activation flex button:

1. Press [TRANS/PGM], then the flex button to be assigned.
2. Press [TRANS/PGM], enter 34.
3. Press [HOLD/SAVE] to store the setting.

To use the mobile extension as a Hunt group member:

1. Press [TRANS/PGM], then 36.
2. Press 1 (activate) or 0 (deactivate).
3. Press [HOLD/SAVE] to store the setting.

To transfer a call from a mobile extension:

NOTE: Mobile Extension can transfer a call to another station or the target station's associated mobile extension.

1. While on a call on a mobile extension, press *.

The mobile extension user hears the internal dial tone, while the party being transferred hears music on hold (if available).

2. Dial the target station number, then disconnect the mobile extension from the call.

The mobile extension user can make this a blind or supervised transfer; the call will be transferred once the mobile phone disconnects from the call.

Hint: If a supervised transfer is attempted, but the target extension does not answer, the mobile extension user can press # to reconnect to the transferred party

To make outgoing calls from the mobile extension:

1. From the mobile extension, dial the system's DID number.
   The internal dial tone sounds.
2. Proceed to make the call (internal or external) using CLI number of associated station.

Music On Hold (MOH)

When a CO call is placed on hold, and this feature is programmed and enabled, the external party will hear music. MOH is supplied through various music sources. Music can be played to any party on hold. The following music sources are available:

Internal Music

External Music

SLT MOH

CONDITIONS

- Only one MOH channel can be used.
- SLT ports connected with MOHU can provide MOH channels.
- Also see "ICM Box Music" on page 1-17, and "Background Music" on page 1-35.

ADMIN PROGRAMMING

Set CO Line MOH

CO Line MOH -- designates MOH on the CO Line (refer to VALUES).	PGM 142 + FLEX 6 + 1 (Internal Music) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Internal Music 2 = External Music 3 = *Reserved* 4-8 = SLT MOH 1-5 9 = Hold Tone

Set MOH Type

MOH Type -- when MOH Type is assigned, the external party of a CO line call placed in the hold state (System, exclusive, transfer, conference, etc.), should hear music.	PGM 171 + FLEX 2 + (VALUE) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Internal Music 2 = External Music 3 = *Reserved* 4-8 = SLT MOH 1-5 9 = Hold Tone

Set Internal MOH Type

Int MOH Type -- system provides 13 kinds of Internal Music on Hold types. (This is used as an internal music source.)	PGM 171 + FLEX 8 + Value (00) + [HOLD/SAVE]	VALUES -- 00 = Romance 01 = Turkish March 02 = Greensleeves2 03 = Fur Elise 04 = Carmen Toreador Song 05 = Waltz Of The Flowers 06 = Pavane 07 = Sichilland 08 = Mozart Piano Sonata 09 = Song Of Spring 10 = La Campanella 11 = Overture No.2 Badinerie 12 = Blue Danube

OPERATION / SETUP

The following values are associated with MOH:

0 = Not assigned

1 = Internal Music

2 = External Music

3 = Reserved

9 = Hold Tone

Mute

When a station user is on a call, the Mute feature can be enabled to prevent the distant party from hearing anything on the station user's end of the conversation. This function will mute the handset, speaker, or headset.

For example, if a user is on a conference call, and doesn't want any noise from his/her office to interrupt or disturb others on the call, Mute can be used to keep all noise from the user's end of the conference from being heard by anyone else on the call.

CONDITIONS

- Mute is released when changing from the speaker mode to the handset.
- Mute stays unchanged when another DSS button is pressed.

OPERATION / SETUP

To enable/disable Mute:

While on a call, press [MUTE].

When enabled, [MUTE] LED will illuminate, and the connected party will not be able to hear sound from the muted station.

When disabled, the LED of the [MUTE] extinguishes, and audio from the muted station is restored.

On-Hook Dialing

The speaker and microphone can be used to make a call without lifting the handset.

CONDITIONS

- On-hook dialing is not available on all phones. This feature must be enabled through ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Enable Auto Speaker

Auto Speaker Select -- if value is set to ON, the station user can access a CO line or make a DSS call by pressing the appropriate {CO} or {DSS} button without lifting handset or pressing the [SPEAKER] button.	PGM 111 + FLEX 1 + Value (0 Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To use On-hook dialing:

1. Verify that the Auto Speaker Selection is ON.
2. Assign a CO line/Intercom/Speed Dial to a flex button.
3. Press the assigned flex button to dial the call.

Remote Mobile Extension Control

A Mobile Extension user can change their mobile extension settings remotely. This feature can only be used when SIP trunks have been configured.

NOTE: Also see "Mobile Extension" on page 1-71.

ADMIN PROGRAMMING

Access the Flexible Numbering Table C

Use PGM 109, then Flex 7 (for Remote MEX Control) … see Quick Reference on page D-3.

OPERATION / SETUP

1. Dial mobile extension's system DID number system.
   An internal dial tone sounds.
2. Go to "the remote control" with remote MEX control code (see ADMIN PROGRAMMING).
   A confirmation tone sounds.
3. Select the appropriate menu (1-6).
   A dial tone sounds.

Remote Control Menu

1: Activate Mobile extension
2: Deactivate Mobile extension
3: Fwd to DVU
4: Cancel Fwd to DVU
5: Activate UCD DND (Agent login)
6: Deactivate UCD DND (Agent log out)

Station Call Coverage

This feature permits a user (who is covering another station user) to receive and answer calls directed from a "covered" station.

CONDITIONS

- A flex button must be assigned at the covering station for calls to be handled for the covered station.
- A station can have multiple Call Coverage buttons, each covering a different station. Multiple stations can have a Call Coverage button for a covered station.
- When a covered station rings, the {CALL COVERAGE} button LED (at the covering station) will flash. In addition, the covering station may receive a ring (immediate or delayed) for the call.
- When a coverage station answers a call for a covered station, any related rings at other stations are stopped. Once answered, the LED of any {CALL COVERAGE} buttons for the covered station at other covering stations are extinguished.
- The station user assigns the call coverage button at their station via the flex button programming sequence.
- This type of button can be set up on both phones and DSS consoles.
- A station user can cover an SLT extension. However, the reverse is not true, an SLT terminal cannot perform the Call Coverage function.
- If the covering station is in DND, no audible ring will be heard.

OPERATION / SETUP

To assign Call-Coverage button to a flex button at a covering station:

1. Press [TRANS/PGM], then the flex button to be assigned.
2. Press [TRANS/PGM], then 46.
3. Enter station number or Hunt Group pilot number (620-629) to cover.
4. Press [HOLD/SAVE] to store the setting.

To enable/disable Call-Coverage at a covering station:

1. Press [TRANS/PGM], then 45.
2. Press 1 to access the Call Coverage Mode.
3. Press 1 (activate) or 0 (disable).
4. Press [HOLD/SAVE] to store the setting.

To set the Call-Coverage Delay Ring Cycle at a covering station:

1. Press [TRANS/PGM], then 45.
2. Press 2 to access Call Coverage Delay Ring Cycle.
3. Enter the delay ring cycle (0-9) to be used.
4. Press [HOLD/SAVE] to store the setting.

To answer calls for a covered station at a covering station:

When a call comes into the covered station:

- The covering station receives audible and visual indications after a programmable delay (see settings above) when there is a ring on the originating station.
- The ring tone is the normal internal or external ring tone cadence.
- The oldest Call Coverage button on any covering stations flashes faster than the others. Any newer calls flash the same as any other incoming call.

Press the flashing Call Coverage flex button at the covering station.

-or-

Press the ON/OFF button (if available).

-or-

Lift the handset.

Station Name Programming (Dial-by-Name)

Each station may be assigned a name that other stations can use for easy dialing of calls to the named station (similar to the way System and Station Speed Dial function).

CONDITIONS

- Each station may be assigned System and Station speed dial numbers of up to 12 characters.
- The system will allow station users to dial station numbers by entering a name that has been programmed for the station (via intercom). When the names are programmed in the digital phone display, the user may select a Station or Speed dial number by the name.
- Dial-by-name is only available on digital phones with a display.
- Names MUST be registered in order to be accessed by the Dial-by-name feature.
- The speed dial without a registered name will not be appear in the Dial-By-Name list.
- For SLTs and digital phones with no display, only the station name can be entered.

OPERATION / SETUP

To register a station name:

1. Press [TRANS/PGM], then 74.
2. Enter the Name (up to 12 characters - using the Character Entry Chart shown on page D-50).
3. Press [HOLD/SAVE] to store the name.

To access Dial-by-Name:

1. Press [SPEED] twice.
2. Press one of the following.

   1 = Intercom

   2 = Station Speed Dial

   3 = System Speed Dial

   A confirmation tone sounds and the names stored in the speed bin are displayed in alphabetical order.

   Hint: Use the procedures shown below to scroll through the list of displayed names.

To scroll through the names stored in the speed dial bin (available for digital phones with displays only):

Once the names appear on the display (see previous procedure for accessing the Dial-by-Name feature):

1. Use the up and down navigation buttons to locate the appropriate name.

   Hint: You can also use the keypad to enter a letter/character to display any names associated with that letter/character, then -

   If two names are displayed:

   - the cursor points to the first name in the LCD.
   - you can enter the next character/letter of the name of the person you want to dial to narrow down the selection(s).

   NOTE: To delete the last letter of input, press [CALLBK].
2. When the appropriate name is displayed, use the up and down navigation buttons move the cursor to the name of the person you want to dial.
3. Press [HOLD/SAVE] to make a call.

To register the name of an SLT:

1. Lift the handset, then enter 563.
   A confirmation tone sounds.
2. Enter 74.
3. Enter the name (up to 12 characters - using the Character Entry Chart on page D-50)
4. Perform a hook-flash to save the name.

Station Port Blocking

A station port can be blocked from receiving or making calls.

CONDITIONS

- Attendant and/or ADMIN PROGRAMMING stations cannot be blocked with this feature.
- A port blocked station cannot be set as part of a linked pair.
- If Station A (110) and B (111) are a linked pair, and these stations are set to port block, the two stations are simultaneously blocked. However, if the linked pair relationship is canceled, these two stations remain blocked.

ADMIN PROGRAMMING

Set Station Port Block

Station Port Block -- if value is set to ON, the station is blocked and is out of service	PGM 113 + FLEX 15 + Value (0 Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Station User Programming

The system supports multiple hierarchical menus based on station programming. Users and Attendants can program stations by selecting the appropriate menus, sub-menus, and programming options. (See Station User Programming Table on page D-48.).

CONDITIONS

- After the programming of a feature or function is completed, the previous menu list appears.
- Pressing a flex button while the User Programming Main Menu is displayed, will activate the Flex Button Programming Mode.

ADMIN PROGRAMMING

Refer to the Station Programming.

OPERATION / SETUP

To enter the programming mode:

1. Press [TRANS/PGM].
   The User Programming Main Menu appears.
2. Use the up and down navigation buttons to view other options in each menu.
3. Enter the number of the menu item you want to access.

   Hint: Press [TRANS/PGM] to return the Main Menu.

Station Relocation

The Station Relocation Feature allows users to maintain all of their station information (including station number, button mapping, speed dial, and class of service) if they move their station to a new location. Once a user unplugs his/her station, then plugs it in at a new location, the previously mention attributes can be restored for the new station location.

IMPORTANT: Digital phones must be relocated to another digital port. Digital phones cannot be relocated to an SLT port.

CONDITIONS

- All port information for the a station will be retained so that it may be copied or relocated to another port.
- If a station type different from the one previously used at a location is plugged, preprogrammed {DSS} buttons are not guaranteed to retain their settings.

OPERATION / SETUP

To store (back up) the station attributes to a temporary buffer (in preparation for relocation):

1. Press [TRANS], then * 1 (for station back up).
2. Unplug the station.

To retrieve stored station attributes once a station has been relocated:

1. Plug the phone in at another properly wired jack.
2. Press [TRANS], then * 2 (for station retrieve).
   The station is relocated in the system, and all station attributes are copied to the current station location.

Station Serial Call (Internal Calls Only)

Using DSS flex buttons, users can place consecutive intercom calls without returning the line to an idle state (no need to hang-up) between calls.

OPERATION / SETUP

To use serial calling:

Press the appropriate DSS flex button.

The current call is disconnected, then a new call is established.

Time & Date Setup (Digital network Only)

In an outgoing call, the ISDN network sends the appropriate time and date with the "connect message" to the called party's display when the call is answered.

CONDITIONS

- This feature may also be set at the Attendant Station.
- Time & Date can be set to a default value or changed based on seasonal time changes.

OPERATION / SETUP

To set the time & date feature for a digital network:

1. Press [TRANS/PGM], then 046
2. Press 1 (Yes).
3. Press [HOLD/SAVE] to save the setting.

Voice Over

This feature allows a user (on a current call) to accept and hear an "announcement" from another station that has camped-on to their station. The user can converse with the camped-on station without the distant party hearing it. The called user can also toggle between the camped-on station and the distant party. However, the camped-on station and the distant party cannot speak to each other.

For example, a user has asked a co-worker to find some information that they need to provide to a current caller. Once the co-worker has found the information he can camp-on (notify) the busy station. At that point, the user can accept the Voice Over, and speak to the co-worker without the distant party hearing their exchange of information. The user can then switch back and forth between the co-worker and the distant party to gather and deliver information.

NOTE: This is not related to Conference Calling. Only the user can hear either of the other two parties. The camped-on station and the distant party cannot hear or speak to each other.

CONDITIONS

- The busy station hears a warning tone over the current voice path indicating another station is camped-on.
- Placing a station in DND disables the Voice Over function. However, an Attendant can make a Voice Over at the station in DND mode.
- During the Voice Over, the [HOLD/SAVE] LED flashes at 60 ipm at the busy station.
- After voice over is activated, both calls will be dropped if the busy station that receives the calls hangs up. If either of the callers hangs up, the [HOLD/SAVE] LED extinguishes and the remaining call will be connected in the normal talking state following the presentation of a confirmation tone.
- When toggling between the camped-on and distant parties, the holding party will hear MOH, if available.
- The recall timer is not activated during Voice Over.
- Every time the busy station toggles between the callers, a confirmation tone sounds.
- If the busy station is using the handset, Voice Over will be activated via the handset. If the busy station is using the speaker, Voice Over will be activated using the speaker.
- Voice Over must be enabled at station in order for it to receive Voice Over announcements. In addition, Caller Voice Over must be enabled for a station to send a Voice Over Announcement - see ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Enable Voice Over

Voice Over -- if value is set to ON, the busy Station can talk alternately between two calling or called parties.	PGM 113 + FLEX 6 + Value (0 Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Enable Caller Voice Over

Caller Voice Over -- if value is set to ON, the station can make a Voice-Over to a busy station.	PGM 111 + FLEX 22 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To accept Voice Over when a Camp-On warning tone is heard by a busy station:

1. Press the flashing [HOLD/SAVE] button.

   The current caller is placed in a hold state and will hear MOH (if available). The busy station is connected to the camped-on station.

2. Press [HOLD/SAVE] to toggle between the two parties (that is the camped-on, and distant parties).

   A confirmation tone will sound each time the user toggles between parties.

   NOTE: The Voice Over is only ended when the camped-on party hangs up, or the user hangs up to end the call.

Wakeup

Each Attendant or station user can set an alarm as a wake-up call or reminder. This feature can be programmed to activate one time or programmed to repeat daily.

CONDITIONS

- If the user goes off-hook during the alarm, a special dial tone sounds.
- If a wake-up alarm is set at a user station, an asterisk (*) appears at the left of the currently displayed time.
- When voice mail is used, a voice message for the wake-up time is played three times, then MOH is presented.
- A Wake Up alert is canceled (for this occurrence only) if there is no response after three rings.
- A Wake Up Fail Timer can be set to notify an Attendant station when a Wake Up alert goes unanswered (after it alerts three times). The following Wake Up Fail Ring Timers can be set:
  - 0 = prevents a Wake Up Fail Ring from ending automatically.
  - 1 to 98 = Wake Up Fail Ring will automatically end after the set Wake Up Fail Ring Timer expires
  - 99 = prevents the Wake Up Fail Ring from being sent to the Attendant Station.

ADMIN PROGRAMMING

Set Wake-up Fail Ring Timer

Wake-up Fail Ring Timer -- designates the amount of time a Wake-up Fail Ring will ring at the System Attendant Station.	PGM 182 + FLEX 7 + Value (20 secs, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99

OPERATION / SETUP

To register a wake-up time alarm from the Attendant Station:

1. Press [TRANS/PGM], then 042.
2. Enter the station range (or station number) to be alerted.

   NOTE: If a single station is to receive the alarm, press * instead of a second station number.
3. Enter the appropriate time the alert should display (using the 24-hour mode: 2-digit hour and 2-digit).

   NOTE: Also refer to “LCD Date/Time Display” on page 1-11 for more information about time formats.
4. Press # to set a one-time only alarm.

   -or-

   Go to step 5 to set the alarm for a daily alert.
5. Press [HOLD/SAVE] to store the setting.

To cancel a wake-up alarm from the Attendant Station:

1. Press [TRANS/PGM], then 043.
2. Enter the station range (or station number) for cancellation of the alarm alert.

   NOTE: If an alarm alert is to be cancelled for only a single station, press * instead of a second station number.
3. Press [HOLD/SAVE] to complete the cancellation.

To set wake-up time alarm at a user station:

1. Press [TRANS/PGM], then 41.
2. Enter the appropriate time the alert should display (using the 24-hour mode: 2-digit hour and 2-digit)

   NOTE: Also refer to “LCD Date/Time Display” on page 1-11 for more information about time formats.
3. Press # to set a one-time only alarm.

   -or-

   Go to step 5 to set the alarm for a daily alert.
4. Press [HOLD/SAVE] to store the setting.

To cancel a wake-up time from a station:

1. Press [TRANS/PGM], then 42.
2. Press [HOLD/SAVE] to complete the cancellation.

Conference Calls

A station user can set up a conference call including both intercom stations and CO Lines. A "conference initiator" uses the Conference feature to add conference members one-by-one to a single conference call. As they are added to the conference, users can immediately speak to each other - even while members are continuing to be added to the session.

There are four Conference features available:

"Multi-line Conferences" on page 1-87
"Conference Room" on page 1-88
"Paging Conference" on page 1-91
"SLT Conference" on page 1-92

Multi-line Conferences

CONDITIONS

- A max. of 15 participants (from either intercom/CO lines) can be included in a conference.
- The first participant call in a conference can be either incoming or outgoing,
- As many as fourteen CO lines can be used to converse with one intercom station.
- An Unsupervised Conference is one that continues even though the conference initiator (supervisor) exits the conference.
- If no internal station is included as a participant in an Unsupervised Conference, the conference is limited by the Unsupervised Conference timer. The default timer setting is ten minutes. However, the Unsupervised Conference timer will be reset if an internal party re-enters/joins the conference.

ADMIN PROGRAMMING

Set Unsupervised Conference Timer

Unsupervised Conference Timer -- designates the amount of the time an unsupervised conference can continue after the initiator of the conference has exited.	PGM 182 + FLEX 6 + Value (10 mins, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99

Enable Multi-line Conference

Multi-line Conference -- if value is set to ON, conference with multiple CO lines is available.	PGM 160 + FLEX 9 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To establish a Conference call and add participants:

1. While on a call, press [CONF].
   The existing call will be put on HOLD and the intercom dial tone will be heard.
2. Dial the number of the next participant.
3. When the call is answered, press [CONF] to add that participant to the conference.

   Hint: If the participant's number is busy or isn't answered, press [CONF] to reconnect to the conference. The next participant can be dialed, as needed.
4. Repeat steps 1-3, until all parties are added to the conference.
5. When all parties have been added, press [CONF] again to connect to the conference.

The Conference Initiator can make an Unsupervised Conference:

During an established conference, press the [CONF].

The initiator is disconnected from the call and the [CONF] LED flashes on the initiating station; the conference and its participants remain connected.

The Conference Initiator can rejoin Conference:

Press the flashing [CONF] to rejoin the call.

Conference Room

This feature allows both internal users or CO callers to join a conference without the need for a conference initiator (see "Multi-line Conferences" on page 1-87). This conference feature uses special codes that allow participants to call and join on their own. Each conference "room" has its own code (similar to using a room number).

When a user enters a conference room, members that have previously entered receive a warning tone. This warning tone is provided to all members. When a user goes out of the conference currently in the room. The warning tone is an optional feature which can be deactivated (see ADMIN PROGRAMMING for this feature).

In addition, each Conference Room can be assigned to a DSS flex button on any station. This Conference Room button flashes (or is steady) depending upon the number of participants in the room.

CONDITIONS

- DID/DISA and transferred CO calls can join a conference room. However, in the case of an analog line, a valid loop timer must be set (see ADMIN PROGRAMMING for this feature) before DISA and transferred CO calls on that line can join a conference room.
- This feature terminates when the deactivation code is dialed or the "Forced Delete PGM" code is used by the Attendant.
- The maximum number of conference rooms is 9. Each conference room can have a maximum of 15 members.
- A password option can be assigned and set.
- A password is not required when deleting a conference room.
- For CO line participants, only an ISDN line can enter a conference room. A caller using a Loop Start T1 trunk will not be permitted to enter a conference room.
- If the System Attendant station has a conference room button, its LED can be used to check the status of conference room. If the LED is:
  - ON (steady) - The conference room is activated, but no members have joined.
  - OFF - The conference room is deactivated.
  - Flashing at 60 ipm - 1 to 3 participants are currently in the room.
  - Flashing 120 ipm - 4 to 6 participants are currently in the room.
  - Flashing 240 ipm - 7 or more participants are currently in the room.

  NOTE: If the Attendant Station does not have such a button, see “To check Conference Room status from an Attendant Station” on page 1-90.

ADMIN PROGRAMMING

Enable/Disable Conference Warning Tone

Conference Warning Tone -- if value is set to ON, other members will hear a warning tone when a new member enters a conference.	PGM 160 + FLEX 11 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Open Loop Timer

Use PGM 142, then FLEX 13 … see page 1-182.

OPERATION / SETUP

To activate the conference room feature:

1. Press [TRANS/PGM], then 43.
2. Designate the Conference Room Number (1-9).
3. Enter the 5-digit password, as needed (optional).
   -and/or-
   Press [HOLD/SAVE] to save the setting.

To deactivate a conference room:

1. Press [TRANS/PGM], then 44.
2. Enter the number of the conference room to be deactivated (1-9).
3. Press [HOLD/SAVE] to complete the setting.

To join a conference room from an internal station:

1. Dial the activated conference room number (571-579).
2. Enter the 5-digit password for entering conference room, if required.

To Transfer CO Call to conference room from an Attendant Station:

1. Press [TRANS/PGM], then dial the activated Conference Room Number (571-579).
2. Enter the 5-digit password for entering conference room, if required.

To check Conference Room status from an Attendant Station:

1. Press [TRANS/PGM], then 047.
2. Enter the number of the conference room number to be checked (1-9).
   Attendant LCD displays the number of members currently in the conference room.

To delete room from an Attendant Station:

1. Press [TRANS/PGM], then 048.
2. Enter the number of the room to be deleted (1-9).
3. Press [HOLD/SAVE] to delete the designated room.

Paging Conference

If a zone page is being initiated, a second user can page simultaneously with the first page initiator.

CONDITIONS

- The Page Timer is not applied to Paging Conference Group.
- If there is a second page initiator, the "Meet Me Page" feature cannot be used.
- If the first initiator goes on-hook, the conference group paging connection is released.
- A second initiator is sent a page regardless of his/her page access privileges.

ADMIN PROGRAMMING

Enable/Disable the Paging Warning Tone

Page Warning Tone -- if value is set to ON, a page warning tone will be heard when paging starts.	PGM 161 + FLEX 4 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable Paging Access

Use PGM 111, then FLEX 8 … see page 1-172.

Use Conference Page Zone

Conference Page Zone -- each station can be assigned to five different conference page zones 06 - 10. All stations are assigned to None by default.	PGM 119 + FLEX 1- 5 (Zone 06-10, toggle) + [HOLD/SAVE]	VALUES -- Default = none

Set SLT Conference Page Join Code

Use PGM 109, then FLEX 5. For more details, refer to the *SBX IP Installation Guide*.

OPERATION / SETUP

To join a Conference Page from a digital phone:

Lift the handset, then press [CONF].

To join a Conference Page from an SLT:

1. Lift the handset, then perform a hook-flash.
2. Dial 58.

SLT Conference

A single line telephone (SLT) user can be used to initiate a three-way conference with any combination of CO line or internal users, as well as incoming or outgoing.

An SLT user can toggle between two calls, while maintaining private conversations with each of the other two parties.

OPERATION / SETUP

To set up a conference from an SLT phone:

1. While on a call, perform a hook-flash.
2. An intercom dial tone sounds, the current call is placed on Exclusive Hold (see "Hold" on page 1-184), and the recall timer is activated.
3. Place the second call.
4. Perform a hook-flash to reconnect to the first call.
5. Within the next two seconds, perform a hook-flash again to join all three participants (including the initiator), and establish the conference.

External Device Control

Door Open

A maximum of four relays can be used for the Door Open feature.

ADMIN PROGRAMMING

Set External Control Contact

First Contact	PGM 168 + FLEX 1 + VALUE (1-3) + [HOLD/SAVE]	VALUES -- 1: LBC (STA #) 2: Door 3: Ext. 1
Second Contact	PGM 168 + FLEX 2 + VALUE (1-3) + [HOLD/SAVE]	
Third Contact	PGM 168 + FLEX 3 + VALUE (1-3) + [HOLD/SAVE]	
Fourth Contact	PGM 168 + FLEX 4 + VALUE (1-3) + [HOLD/SAVE]	

Set Door Open Timer

Door Open Timer -- designates the length of time needed to execute the door open relay.	PGM 181 + FLEX 5 + 20 Value (100 msec, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 05-99

OPERATION / SETUP

To use the Door Open feature:

Enter the Door Open code.

-or-

Press the programmed {DOOR OPEN} button.

To assign a {DOOR OPEN} flex button:

1. Press [TRANS/PGM], then press the flex button to be assigned.
2. Enter one of the following sequences:
   #*1 = 1st Door Open
   #*2 = 2nd Door Open
   #*3 = 3rd Door Open
   #*4 = 4th Door Open
3. Press [HOLD/SAVE] to store the setting.

Doorboxes

A convenient intercom Doorbox can be connected to the system. The intercom Doorbox can be used to receive page announcements and intercom calls. The Doorbox can also signal assigned stations in the system. Any combination of digital phones or Doorboxes can be arranged in the system.

CONDITIONS

- The Doorbox cannot:
  - participate in a conference call.
  - receive a CO call.
- A Doorbox can be a member of a page zone group.
- To receive a Doorbox call on an SLT, the Doorbox Signaling value must be set to ON (see ADMIN PROGRAMMING for this feature).
- SLTs and cordless phones can only receive one call from the Doorbox.
- Also see "ICM Box Music" on page 1-17.

ADMIN PROGRAMMING

Set Doorbox/ICM Box Signaling

Intercom Box Signaling -- if value is set to ON, the station can receive an intercom box signal.	PGM 111 + FLEX 6 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Assign Station ID

Use PGM 110 … see page 1-17.

Set ICM Box Music Channel

ICM Box / Doorbox Music Channel -- establishes which music channel will supply music to Doorbox(es)	PGM 171 + FLEX 3 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Int. Music 2 = External Music 3 = n/a 4-8 = SLT MOH

Set ICM Box Timer

ICM Box Timer -- designates the ringing time of the intercom (ICM) box at a Station, when the ICM box user presses the [CALL] button.	PGM 181 + FLEX 6 + Value (30 secs, 2 digits) + [HOLD/SAVE]	VALUES -- Range 00-60

OPERATION / SETUP

To call a Doorbox:

1. Go off-hook.
2. Dial the station number of the Doorbox, or press the {Doorbox] flex button.
3. Wait for the warning tone, then announce the call.

To place a call from a Doorbox to an assigned station:

Press [CALL].

To answer an intercom call at a digital phone station assigned for Doorbox signals:

Press the {Doorbox] flex button.

To answer an intercom call at an SLT station assigned for Doorbox signals:

Go off-hook.

To place the Doorbox in DND mode:

Press [DND].

Loud Bell

The Loud Bell Control (LBC) contacts are activated when the assigned station receives ringing from an incoming or transferred call.

CONDITIONS

- Two LBC contacts can be assigned individually to a single station.

  NOTE: Although the contacts may be assigned to the same station, only the first contact will be activated for intercom calls.
- The LBC 1 can be programmed as an external night ring contact as well as a LBC contact.
- In Night Mode, LBC 1 follows the UNA ring assignment, and ignores the station ring.
- An external ringing device should be attached to the contacts.

ADMIN PROGRAMMING

Enable External Night Ring

External Night Ring -- if value is set to ON, when an incoming CO call is received and UNA service is activated, the call will be sent to LBC1.	PGM 160 + FLEX 7 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable Universal Night Answer

Use PGM 141, then FLEX 8 … see page 1-133.

Enable External Control Contacts

Loud Bell Control (LBC) -- if an External Control Contact is assigned to LBC, it is activated. During night mode, LBC1 may be programmed to provide external night ringing. In this case LBC1 does not follow the associated Station ring.	PGM 168 + FLEX 1 (Range: FLEX 1-FLEX 4) + 1 + Station Number + [HOLD/SAVE]	VALUES -- 1 = LBC (Sta #) 2 = Door 3 = Ext. 1
Door Open -- the External Control Contact can be used when programmed to open a door.	PGM 168 + FLEX 1 + 2 + [HOLD/SAVE]	
External Relay -- the External Control Contact can be for an External Relay.	PGM 168 + FLEX 1 + 3 + [HOLD/SAVE]	

Hunt Groups

Stations can be organized into Hunt Groups that allow incoming calls to be routed to an idle station within the group. This reduces the chance a caller will reach a busy station. In addition, special voice mail announcements can be set up to play for calls waiting to be answered in a Hunt group.

CONDITIONS

Special Hunt Group Feature Conditions

- **Overflow Timer** - When the Overflow Timer expires, and a call is unanswered, the call will be diverted to a pre-defined overflow destination. The overflow destination can be an individual station, a Group, voice mail announcement, or a system speed dial bin number.
  - The Overflow Timer begins after the announcement is played.
  - If a call is not answered when the Overflow Timer expires, it will be sent to the overflow destination while the voice mail announcement is being played.
  - If overflow destination is not assigned, calls will be dropped when overflow timer expires.
- **Wrap Up Timer** - This feature can be used to delay new calls to a member of the Hunt Group that has just become idle. This delay gives the group member a set amount of time between answering calls (to make notes, take a short break, etc.) After the wrap-up timer expires, the member station returns to an idle state that tells the system it is ready to receive calls.
- **Music Source -** The system supports up to eight different music sources for Hunt Groups (not including the ring back tone). When a call goes to queue (on hold), the caller hears music from the pre-assigned music source.
- **Multiple Member Assignment** - An individual station can be a member of one or more Hunt Groups (of the same type).

General Conditions

- Twenty-six stations can be assigned to a Hunt Group, and there can be a total of ten Hunt Groups.
- A Hunt Group may be assigned as one of the following five types:
  - Circular - see "Circular Hunt Groups" on page 1-99
  - Terminal - see "Terminal Hunt Groups" on page 1-99
  - UCD - see "Unified Call Distribution Groups (UCD Groups)" on page 1-101
  - Ring - see "Ring Hunt Groups" on page 1-112
  - Only the 1st announcement may be used for a guaranteed announcement.

- A station in DND/Call Forward state cannot receive Group calls.
- Transferred calls to a Hunt group do not ring back to the transferring station.
- Ring/Hunt group names are not supported for external voice mail groups.

Unanswered Calls

- When a call rings into a Hunt Group, it rings until it is answered. If it is not answered, the first pre-set voice mail announcement is played. If the call is still not answered by the time the first Announcement Timer expires (the default setting is 0), a second announcement can be set up to be played. In addition, a voice mail announcement may be set up to repeat until the call is answered or until the caller hangs up.
  - If an Announcement Timer is set and no voice mail number is assigned, the announcement will be ignored.
- If there is no available member in a Group because every member sets DND, UCD DND, or call forward, all new calls to the Group (and all queued calls) can be rerouted to another destination:
  - Assigned Overflow destination - this can be a station, another hunt group, or a speed bin number (see ADMIN PROGRAMMING for this feature).
  - Assigned Alternative destination - if the group is an UCD group - see "Unified Call Distribution Groups (UCD Groups)" on page 1-101.
- If a call goes unanswered and has been cycled through all stations as programmed for a particular Hunt Group, it can be programmed to then be sent to voice mail, to an over flow destination, or be dropped.
- If an unanswered call routes to a pre-defined overflow (destination):
  - Station, and the incoming call remains unanswered, it can be programmed to go to voice mail, or it can be dropped.
  - Hunt Group, and the incoming call remains unanswered, it can be programmed to go to cycle through the various stations in the group, and/or sent to voice mail, or the call can be set to be dropped.
  - Speed Dial Bin (usually a mobile/cell phone) and the incoming call remains unanswered, it transfer into that destination's voice mail, if available.
- Incoming CO calls will be dropped when the number of queued calls exceeds the pre-defined maximum for an UCD group - see "Unified Call Distribution Groups (UCD Groups)" on page 1-101.
- The Pick-up Hunt Group is reserved for intercom calls only.
- Group pick-up won't work with a Hunt Group pilot number. If the action is attempted, an error tone will sound.

ADMIN PROGRAMMING

Assign Hunt Groups

Enter the appropriate Hunt Group number (620-629) and follow the specific procedure:

Group Type -- assigns the Hunt Group type: Circular / Terminal / UCD / Ring / VM / Pick-up / Networking VM. (Note: Use BACK softkey to go back to main entry)	PGM 190 + FLEX 1 + 0 Group Type (refer to VALUES) + [HOLD/SAVE]	VALUES - 0 = not assigned 1 = Circular 2 = Terminal 3 = UCD 4 = Ring 5 = VM 6 = Pick up 7 = Networking VM
Pick-up Attribute -- assigns pick-up attributes for the Hunt Group. All types of Hunt Groups can be assigned the optional pick-up attribute, except for pick-up hunt group.	PGM 190 + FLEX 2 + 0 (OFF) + [HOLD/SAVE]	VALUES - 0 = OFF 1 = ON
Member Assignment -- the member assignment process can be executed in two ways: Assigning individually by pressing the Flexible Button and the desired user to assign and then enter the station number. The other way is to successively assign, by entering the first station number and then the last station number. NOTE: When there are too many stations to see, you can scroll data using the volume up/down keys.	PGM 190 + FLEX 3 + Station NUMBER + [HOLD/SAVE]	

Set Hunt Group Attribute

Use PGM 191:

-Circular/Terminal Groups on page 1-99

-UCD Groups on page 1-105

-Ring Groups on page 1-112

-Voice Mail Groups on page 1-114

-Pick-Up Group on page 1-115

Circular/Terminal Hunt Groups

Circular Hunt Groups

An incoming call is routed to the first idle station in the group (versus the first "designated" station as in a Terminal Hunt Group, and if the station is unavailable or does not answer the call, the call is routed to the next station in the group. The call will continue to route to each station until it is answered or the last station in the group is tried. If the call goes unanswered and is routed to the last station in the group, the call will remain at the last station in the group, or it will be sent to the assigned overflow station or group.

If a Hunt Group has a designated "pilot number" (also known as a Hunt group number), only calls that go to the pilot number will "hunt" (when unanswered) for an available station.

Terminal Hunt Groups

In coming calls will go to the station that is designated as the "first" station in the group (rather than the first idle station as a Circular Hunt Group does - see above). If unanswered or unavailable, the call proceeds to the next listed station in the group. The call will continue to be rerouted until reaching the last station in the group where the call will remain or can be sent to an overflow station/group. A terminal Hunt group can be assigned with a pilot number (Hunt group number) and only calls to the pilot number will hunt.

ADMIN PROGRAMMING

Set Circular/Terminal Hunt Group Attributes

CIRCULAR/TERMINAL GROUP ATTRIBUTES		
VMIB Announce 1 Timer -- if the call is not answered during the timer, the System will play the voice mail announcement that is programmed.	PGM 191 + FLEX 1 + 015 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
VMIB Announce 2 Timer -- the second voice mail announcement will be played if call continues to wait beyond the expiration of 2nd announcement timer.	PGM 191 + FLEX 2 + 000 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
VMIB Announce 1 Location -- used to play the voice mail announcement, when the VMIB announce 1 timer expires.	PGM 191 + FLEX 3 + 00 VMIB Announcement Number + [HOLD/SAVE]	VALUES -- Range = 00-70 (00 = not assigned)
VMIB Announce 2 Location -- used to play the voice mail announcement, when the VMIB announce 2 timer expires.	PGM 191 + FLEX 4 + 00 VMIB Announcement Number + [HOLD/SAVE]	VALUES -- Range = 00-70 (00 = not assigned)
VMIB Announce 2 Repeat Timer -- used to repeat the VMIB announce 2 when the timer expires.	PGM 191 + FLEX 5 + 000 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999 (00 = not assigned)

CIRCULAR/TERMINAL GROUP ATTRIBUTES		
VMIB Announce 2 Repeat Enable/Disable -- used to enable or disable the VMIB Announce 2 Repeat.	PGM 191 + FLEX 6 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Overflow Destination -- calls to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires.	PGM 191 + FLEX 7 + Value (Destination Type 1-4) + Value (Sta/Hunt Group/VMIB/Speed Bin) + [HOLD/SAVE]	VALUES -- 1 = Station # 2 = Hunt # 3 = VMIB 00-70 (00 = not assigned) 4 = System Speed # (2000-2499)
Overflow Timer -- if timer expires after a call is received in the group, the call will be routed to the overflow destination.	PGM 191 + FLEX 8 + 180 seconds + [HOLD/SAVE]	VALUES -- Range = 000-600
Wrap-up Timer -- is used to delay new calls to a member of the Hunt Group that has just become idle.	PGM 191 + FLEX 9 + 002 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
No Answer Timer -- in circular/terminal Hunt Group, if the incoming call is not answered during the allowed time, the call will be routed to the next idle station in the group.	PGM 191 + FLEX 10 + 15 Seconds (Value) + [HOLD/SAVE]	VALUES -- Range = 00-99
Pilot Hunt -- if value is set to ON, calls to the each Hunt Group member will be processed as a call to Hunt Group. A circular/terminal hunt group can be assigned with a pilot number so that only calls to the pilot number will be treated as calls to the Hunt Group.	PGM 191 + FLEX 11 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Alt If No Member -- if a member is not on duty, intercom calls will be dropped and CO incoming calls will be routed to the designated overflow destination, or will ring at the assigned Station if the overflow destination is not assigned.	PGM 191 + FLEX 12 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Music Source -- if a music source is assigned, user will be able to hear music instead of a ring back tone	PGM 191 + FLEX 13 + 0 Music Source (refer to Values) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Internal Music 2 = External Music 3 = n/a 4-8 = SLT MOH

CIRCULAR/TERMINAL GROUP ATTRIBUTES		
Alt Destination -- if no members are on duty or all members are busy, incoming CO calls will be routed to an alternate destination.	PGM 191 + FLEX 14 + Value (Destination Type) + Station or Hunt Group Number + [HOLD/SAVE]	VALUES -- 1 = Sta # 2 = Hunt #
Max Queue Count -- if no members are on duty or all members are busy, incoming CO calls will be queued. The Hunt Group Supervisor will be able to see the queued incoming call count until the max queue count is attained.	PGM 191 + FLEX 15 + 99 (Value, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
Hunt Member Forward -- OFF is receive Hunt Call, ON is not receive Hunt Call.	PGM 191 + FLEX 16 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Queue Count Display -- if value is set to ON, a Hunt Group member can check the Queue Count.	PGM 191 + FLEX 17 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Unified Call Distribution Groups (UCD Groups)

Calls are sent to a group when the designated pilot number (Hunt group Number) is dialed or when specific CO lines have been programmed to send calls directly to the group. Incoming calls from either source are first routed to the station in the group that has been idle for the longest time. If all stations in the group are busy when a call is received, the call may be programmed to be routed to an alternate location, or to wait (queue) for the next available station in the group. If queued, and based on programming, the queued call may be routed to an overflow station.

CONDITIONS

Agents

- The following features are available to agents in an UCD group:
  - Agent Login/Logout - a UCD agent can be assigned to more than one UCD group.
  - Agent On/Off Duty - an agent can set their status for On/Off duty (see OPERATION / SETUP on 1-108).
  - Alternate UCD Group - an alternate UCD group can be programmed so that if stations are busy, the system will check the alternate group for an available station.

Supervisor

- Supervisor Login/Logout - Each UCD group can be assigned a separate supervisor.
- There are three special features available to a supervisor:
  - Supervisor Monitor - This allows an UCD supervisor to monitor an agent's call in progress, or to provide assistance. When used, a supervisor may intrude into an agent's call in "listen only" mode or in a conference mode (with 2-way audio). A warning tone can be enabled or disabled.
  - Reroute Queued Call - The supervisor can reroute a queued call to another destination.
  - Database Assignment - The supervisor can change the overflow destination, overflow time, and wrap-up time.

Reports

- Reports are based on the supervisor's request for the UCD group, including the following group statistics:
  - Total calls
  - Number of unanswered calls
  - Average and the longest queued calls
  - Number and total time when all agents are busy
  - Average ringing time before answer
  - Average service time after answer
- The user can print an RS-232C statistics report in order to periodically review the same group status as seen by the UCD supervisor.
- If UCD Print Enable is set to ON, the statistic report is printed periodically (see ADMIN PROGRAMMING on 1-103).

Voice Mail Announcements

- Announcements can be assigned to provide different messages to each UCD group.
- Announcements can be programmed to play for incoming calls to a group where all stations are busy.
- First, second, and guaranteed announcements can be assigned.
- A guaranteed announcement can be used by assigning a value of 0 seconds to the first announcement.

General

- The supervisor should assign an {UCD} flex button (see OPERATION / SETUP on 1-108).

- Agents can use Hot Desk to login and logout (see "Hot Desk on page 1-59).
- A UCD Supervisor can activate two-way recording when monitoring an agent's conversation.
- Queue Information of Queuing Call count automatically appears on the supervisor's station display, as well as on the agents' displays.
- An overflow station may be assigned to route queued callers to a designated station after a specified time. The overflow station does not have to be a member of the UCD group. The overflow station can be forwarded.
- The DSS LED of the {UCD Group} will flash faster as the number of queued calls increases:
  - Off = 0 callers in queue
  - 60 ipm = 1to 3 callers
  - 120 ipm = 4 to 6 callers
  - 240 ipm = 7 or more callers

ADMIN PROGRAMMING

Assign Hunt Group

Use PGM 190 … see 1-98.

Set UCD Hunt Group Attributes

Use PGM 191 … see page 1-105.

Enable UCD Print (print UCD statistics periodically)

UCD Call Distribution Print Enable -- if value is set to ON, UCD printing is available. NOTE: If this option is enabled, the ON-Demand print format is not used. Instead, the Periodic format is printed.	PGM 161 + FLEX 9 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

UCD Group Report

~	1	=	2	=	3	=	4	=	5	=	6	=	7	=	8	=	9	=	0	cr	lf

FIELDS	DESCRIPTION
~ (tilde)	Means start of UCD statistics and is always located at first column
= (equal)	Delimiter between each meaningful data
1	UCD Group number
2	Total call counter
3	Unanswered call counter
4	All busy counter
5	Average ringing time (in sec)
6	Average call service time (in sec)
7	Total busy time (in sec)
8	Number of current queued calls
9	Longest queued time
0	Average queued time
cr	Carriage Return (0x0D)
lf	Line Feed (0x0A)

UCD Agent Report

~	1	=	2	=	3	=	4	=	5	cr	lf

FIELD	DESCRIPTION
~ (tilde)	Means start of UCD statistics and is always located at first column
= (equal)	Delimiter between each meaningful data
1	Each Agent number
2	Total call counter
3	Unanswered call counter
4	Average ringing time (in sec)
5	Average service time (in sec)
cr	Carriage Return (0x0D)
lf	Line Feed (0x0A)

Set UCD Print Timer

UCD (ACD) Print Timer -- UCD/ACD database can be printed per the desired time interval (10 sec or 1 hour base).	PGM 161 + FLEX 10 + 001 (3 digits) + [HOLD/SAVE]	VALUES -- Range = 001-225 PGM 161 - FLEX 14

Clear UCD Database (After Print)

UCD (ACD) Clear Database after Print -- if value is set to ON, the UCD (ACD) database is re-initialized after printing.	PGM 161 + FLEX 11 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

UCD Programming Codes

UCD GROUP ATTRIBUTES		
VMIB Announce 1 Timer -- if the call is not answered during the timer, the System will play the voice mail announcement that is programmed.	PGM 191 + FLEX 1 + 015 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
VMIB Announce 2 Timer -- the second voice mail announcement will be played if call continues to wait beyond the expiration of 2nd announcement timer.	PGM 191 + FLEX 2 + 000 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
VMIB Announce 1 Location -- used to play the voice mail announcement, when the VMIB announce 1 timer expires.	PGM 191 + FLEX 3 + 00 VMIB Announcement Number + [HOLD/SAVE]	VALUES -- Range = 00-70 (00 = not assigned)
VMIB Announce 2 Location -- used to play the voice mail announcement, when the VMIB announce 2 timer expires.	PGM 191 + FLEX 4 + 00 VMIB Announcement Number + [HOLD/SAVE]	VALUES -- Range = 00-70 (00 = not assigned)
VMIB Announce 2 Repeat Timer -- used to repeat the VMIB announce 2 when the timer expires.	PGM 191 + FLEX 5 + 000 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999 (00 = not assigned)
VMIB Announce 2 Repeat Enable/Disable -- used to enable or disable the VMIB Announce 2 Repeat.	PGM 191 + FLEX 6 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

UCD GROUP ATTRIBUTES		
Overflow Destination -- calls to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires.	PGM 191 + FLEX 7 + Value (Destination Type 1-4) + Value (Sta/Hunt Group/VMIB/Speed Bin) + [HOLD/SAVE]	VALUES -- 1 = Station # 2 = Hunt # 3 = VMIB 00-70 (00 = not assigned) 4 = System Speed # (2000-2499)
Overflow Timer -- if timer expires after a call is received in the group, the call will be routed to the overflow destination.	PGM 191 + FLEX 8 + 180 seconds + [HOLD/SAVE]	VALUES -- Range = 000-600
Wrap-up Timer -- is used to delay new calls to a member of the Hunt Group that has just become idle.	PGM 191 + FLEX 9 + 002 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
Alt If No Member -- if a member is not on duty, intercom calls will be dropped and CO incoming calls will be routed to the designated overflow destination, or will ring at the assigned Station if the overflow destination is not assigned.	PGM 191 + FLEX 10 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Music Source -- if a music source is assigned, user will be able to hear music instead of a ring back tone	PGM 191 + FLEX 11 + 0 Music Source (refer to Values) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Internal Music 2 = External Music 3 = n/a 4-8 = SLT MOH
UCD Warning Tone -- a UCD supervisor can monitor agent conversations. A warning tone can be provided to the agent and connected party when the supervisor activates the monitor feature.	PGM 191 + FLEX 12 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Alt Destination -- if no members are on duty or all members are busy, incoming CO calls will be routed to an alternate destination.	PGM 191 + FLEX 13 + Value (Destination Type) + Station or Hunt Group Number + [HOLD/SAVE]	VALUES -- 1 = STA # 2 = Hunt #

UCD GROUP ATTRIBUTES		
Supervisor Timer -- when a call is received in the Group, and no Stations are available, the call will be queued. If the total queued call count is more than the supervisor call count (ACD queued call Admin program value is set to ON), and the queued time is longer than this timer, then the counts of queued calls will be displayed on the Supervisor's LCD.	PGM 191 + FLEX 14 + 030 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
Supervisor Call Count -- if the number of queued calls is more than Supervisor Call Count, the supervisor timer will be started.	PGM 191 + FLEX 15 + 00 seconds + [HOLD/SAVE]	VALUES -- Range = 00-99
ACD Queued Call -- if value is set to ON, the count of queued calls can be displayed on the Supervisor Station LCD.	PGM 191 + FLEX 16 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Max Queue Count -- if no members are on duty or all members are busy, incoming CO calls will be queued. The Hunt Group Supervisor will be able to see the queued incoming call count until the max queue count is attained.	PGM 191 + FLEX 17 + 99 (Value, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
Supervisor -- used to set the Supervisor station number.	PGM 191 + FLEX 18 + Value (Sta Number) + [HOLD/SAVE]	VALUES -- Range = 100-131
UCD Hunt Stations' Priority -- used to set the UCD group member's priority. The value of 0 is the highest priority, and the value of 9 is the lowest priority. If the station has high priority, it takes more priority to receive the incoming call.	PGM 191 + FLEX 19 + 0 Value (1 digit) + [HOLD/SAVE]	VALUES -- Range = 0-9
Hunt Member Forward -- OFF is receive Hunt Call, ON is not receive Hunt Call.	PGM 191 + FLEX 20 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
UCD DND Timer -- if timer is set to 00, it will not be activated. If this timer is set to 10, after 10 sec ringing UCD member is automatically UCD DND state.	PGM 191 + FLEX 21 + 00 Value + [HOLD/SAVE]	VALUES -- Range = 00-60
Queued Tone --	PGM 191 + FLEX 22 + Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To program a flex button for {UCD Status}:

1. From a Supervisor phone, press [TRANS/PGM], then the flex button to be assigned.
2. Press [TRANS/PGM], then 8*.
3. Enter UCD Group No to be associated with the assigned flex button.
4. Press [HOLD/SAVE] to store the setting.

To program a flex button for {UCD DND}:

1. From a UCD member Agent phone, press [TRANS/PGM], then the flex button to be assigned.
2. Enter the group number.

To enable/disable UCD-DND for an UCD agent station:

IMPORTANT: *A **{UCD DND} flex button must be programmed for this feature.***

Press the {UCD-DND} flex button to toggle this setting on and off.

The {UCD-DND} LED lights when the setting is enabled.

Supervisor Functions

To re-route queued calls with answer by the supervisor:

IMPORTANT: *A {UCD Group} flex button must be programmed for this feature.*

1. Press the flashing {UCD Group} button.
   The first queued incoming CO call is routed to the supervisor.
2. Lift the handset to answer the call.

To re-route queued calls without answering:

This function follows the normal operation for the DSS button feature assigned to "station group". The DSS LED of the {UCD Group} button flashes when there are queued calls.

IMPORTANT: *An {UCD Group} flex button must be programmed for this feature.*

1. When the {UCD Group} button flashes, enter 564 (that is, the "No Answer" code).
2. Enter the destination station or press the {DSS} soft button (if available and appropriate) to which the first queued call should be rerouted.

To monitor an agent's conversation from the UCD supervisor station:

IMPORTANT: *A {UCD Group} flex button must be programmed for this feature.*

1. Dial the busy agent station.
2. At the busy tone, press the {UCD Status} flex button.
   Monitoring begins (the supervisor can hear, but not speak to the agent).

To Record an agent's conversation from the UCD supervisor station:

IMPORTANT: *A [Two Way Recording] button must be programmed for this feature.*

1. Dial the busy agent station.
2. At the busy tone, press the {UCD Status} flex button.
   Monitoring begins (the supervisor can hear, but not speak to the agent).
3. Press [Two Way Recording].
   This begins recording of the agent's conversation. When recording ends, it is stored as a message in the supervisor's voice mailbox.

UCD Group Database and Routing Information

To run the UCD Statistics Report:

1. Press the [Supervisor Status] flex button.
   The Status & Control Menu is displayed.
2. Press 1 to view UCD call statistics for the group. The statistics will appear as follows:
   - UCD Group
   - Total Calls
   - Average Call Time
   - Average Ring Time
   - Busy Count and Time
   - Number of calls in queue
   - Average and Longest Queued Time
   - Unanswered Call Count

To Access the UCD Routing Database:

1. Press the [Supervisor Status] flex button.
   The UCD Menu options are displayed.
2. Press 2 to select the UCD Database option.
3. Use the navigation up and down buttons to make a selection from the database items:
   UCD Database
   Overflow Destination- station/group
   Overflow Time- xxx seconds
   Wrap-Up Time- xxx seconds
4. Enter the appropriate data, as needed.
5. Press [HOLD/SAVE] to store the changes.

To print UCD Statistics:

1. Press a programmed {UCD Status} button:
   A menu of options is displayed:
   1 (Status) / 2 (Dbase) / 3 (Duty) / # (Print)
2. Press # to select the Print option.
3. Press [MUTE] to initialize the database (that is, to prevent overlap of future reports).

   NOTE: While in the reporting status (1), the supervisor can initialize all stored report information in the database by pressing [MUTE]. When the {UCD} soft button is pressed while the station is in any sub-state, the station goes to (2) state.

Group Statistics report example includes:

- UCD GROUP INFORMATION (*620 GRP)-
- Date: 07/15/08 Time: 05:40:07
- Total Calls: 2
- Unanswered Calls: 2
- All STA Busy Count: 2
- Average Ringing Time: 00Min 00Sec
- Average Service Time: 00Min 00Sec
- All STA Busy Time: 01Min 17Sec
- Calls in Queue, Now: 0

UCD Agent Information

To access Agent Duty Status (Agent Statistics):

1. Press the [Supervisor Status] flex button.
   The UCD menu options are displayed.
2. Press 3 to select the UCD Duty option.
   Duty options are displayed.
3. Press 1 to display the Duty Status information for the first agent in the list.
4. Use * or # to display information for the next agent in the list.
   -and/or-
5. Use the up and down navigation buttons to view additional information for each agent:
   - Duty Status
   - Agent Name
   - Total Calls

- Ave (average) Call Time
- Ave (average) Ring Time
- Unanswered Calls
- Number of UCD calls served
- Average UCD call service time after answer.
- Average ring time before answer
- Number of unanswered UCD Calls

To control Agent Duty status:

1. Press the [Supervisor Status] flex button.
   The UCD menu options are displayed.
2. Press 3, then 2 to display the Duty option set for the first agent in the list.
3. Press * to scroll through the list of agents.
4. Press 0 (Off Duty) or 1 (On Duty) to change duty status for the currently displayed agent.

To output Agent Statistics Report:

IMPORTANT: *Be sure UCD Print programming is set up properly (see ADMIN PROGRAMMING).*

1. Press the [Supervisor Status] flex button.
   The UCD menu options are displayed.
2. Press 3, then # to select the Duty Print option set for the first agent in the list.
3. Use * or # to display information for the next agent in the list.
4. Press [MUTE] to initialize the database (that is, to prevent overlap of future reports).

   NOTE: The following is an example of the statistical information that prints out for a specific agent.

```
=============================================================================
ACD GROUP INFORMATION (*620)        Date: 07/15/08 Time: 05:42:24
AGENT_NO | TOTAL_CALL | UNANSWERED_CALL | AVE_RING_TIME | AVE_SVC_TIME
=============================================================================
  1001 |         0 |              0 |   00Min 00Sec |   00Min 00Sec
=============================================================================
```

Ring Hunt Groups

When a call comes into a group, it rings at all of the stations in the group simultaneously until one of stations answers the call. If an overflow destination has been designated, unanswered calls can be programmed to be routed to that station or hunt group.

NOTE: Ring/Hunt group name is not supported for external voice mail groups

ADMIN PROGRAMMING

Set Ring Hunt Group Attributes

RING HUNT GROUP ATTRIBUTES		
VMIB Announce 1 Timer -- if the call is not answered during the timer, the System will play the voice mail announcement that is programmed.	PGM 191 + FLEX 1 + 015 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
VMIB Announce 2 Timer -- the second voice mail announcement will be played if call continues to wait beyond the expiration of 2nd announcement timer.	PGM 191 + FLEX 2 + 000 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
VMIB Announce 1 Location -- used to play the voice mail announcement, when the VMIB announce 1 timer expires.	PGM 191 + FLEX 3 + 00 VMIB Announcement Number + [HOLD/SAVE]	VALUES -- Range = 00-70 (00 = not assigned)
VMIB Announce 2 Location -- used to play the voice mail announcement, when the VMIB announce 2 timer expires.	PGM 191 + FLEX 4 + 00 VMIB Announcement Number + [HOLD/SAVE]	VALUES -- Range = 00-70 (00 = not assigned)
VMIB Announce 2 Repeat Timer -- used to repeat the VMIB announce 2 when the timer expires.	PGM 191 + FLEX 5 + 000 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999 (00 = not assigned)
VMIB Announce 2 Repeat Enable/Disable -- used to enable or disable the VMIB Announce 2 Repeat.	PGM 191 + FLEX 6 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Overflow Destination -- calls to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires.	PGM 191 + FLEX 7 + Value (Destination Type 1-4) + Value (Sta/Hunt Group/VMIB/Speed Bin) + [HOLD/SAVE]	VALUES -- 1 = Station # 2 = Hunt # 3 = VMIB 00-70 (00 = not assigned) 4 = System Speed # (2000-2499)

RING HUNT GROUP ATTRIBUTES		
Overflow Timer -- if timer expires after a call is received in the group, the call will be routed to the overflow destination.	PGM 191 + FLEX 8 + 180 seconds + [HOLD/SAVE]	VALUES -- Range = 000-600
Wrap-up Timer -- is used to delay new calls to a member of the Hunt Group that has just become idle.	PGM 191 + FLEX 9 + 002 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
Music Source -- if a music source is assigned, user will be able to hear music instead of a ring back tone	PGM 191 + FLEX 10 + 0 Music Source (refer to Values) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Internal Music 2 = External Music 3 = n/a 4-8 = SLT MOH
Max Queue Count -- if no members are on duty or all members are busy, incoming CO calls will be queued. The Hunt Group Supervisor will be able to see the queued incoming call count until the max queue count is attained.	PGM 191 + FLEX 11 + 99 (Value, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
VMIB Supervisor --	PGM 191 + FLEX 12 + Value (Sta Number) + [HOLD/SAVE]	VALUES -- Range = 100-131
Hunt Member Forward -- OFF is receive Hunt Call, ON is not receive Hunt Call.	PGM 191 + FLEX 13 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Queue Count Display -- if value is set to ON, a Hunt Group member can check the Queue Count.	PGM 191 + FLEX 14 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Voice Mail Hunt Groups (SLT only)

A Voice Mail Hunt Group must be assigned to analog lines only. When a call comes into a Voice Mail group, the caller hears a list of choices. At that point, the call will be handled according to the programmed options/destinations.

NOTE: Ring/Hunt Group Name is not supported for external voice mail groups.

ADMIN PROGRAMMING

Set Voice Mail Hunt Group Attributes

VOICE MAIL GROUP ATTRIBUTES		
Wrap-up Timer -- is used to delay new calls to a member of the Hunt Group that has just become idle.	PGM 191 + FLEX 1 + 002 seconds + [HOLD/SAVE]	VALUES -- Range = 000-999
Put Mail Index -- one of the voice mail dialing tables.	PGM 191 + FLEX 2 + 1 Value + [HOLD/SAVE]	VALUES -- Range = 1-4
Get Mail Index -- one of the voice mail dialing tables.	PGM 191 + FLEX 3 + 2 Value + [HOLD/SAVE]	VALUES -- Range = 1-4
Hunt Type -- used to set the hunt type for voice mail members.	PGM 191 + FLEX 4 + 2 (Terminal) + [HOLD/SAVE]	VALUES -- 1 = Circ 2 = Term
SMDI Port -- N/A The Simplified Message Desk Interface (SMDI) dictates the distribution of VM information	PGM 191 + FLEX 5 + SMDI Port + [HOLD/SAVE]]	VALUES -- Range = 01-11
Overflow Timer -- if timer expires after a call is received in the group, the call will be routed to the overflow destination.	PGM 191 + FLEX 6 + 180 seconds + [HOLD/SAVE]	VALUES -- Range = 000-600
Overflow Destination -- calls to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires.	PGM 191 + FLEX 8 + Value (Destination Type 1-4) + Value (Sta/Hunt Group/VMIB/Speed Bin) + [HOLD/SAVE]	VALUES -- 1 = Station # 2 = Hunt # 3 = VMIB 00-70 (00 = not assigned) 4 = System Speed # (2000-2499)

Pick-Up Groups

ADMIN PROGRAMMING

Set Pick-Up Group Attributes

PICK-UP GROUP ATTRIBUTES		
Auto Pick-up -- if value is set to ON, and there is ringing at a hunt member, another hunt member can pickup the call automatically by pressing the [SPEAKER] button or going off-hook.	PGM 191 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
All Ring -- if value is set to ON, and a hunt group member receives an intercom call, then all hunt group member stations will ring. NOTE: Auto Pickup Admin program must be set to ON.	PGM 191 + FLEX 2 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Hunt Group Name Service

The name of the Hunt Group can be programmed to be displayed upon calls coming into Circular/Terminal, UCD, and Ring Hunt Group types (see "General Conditions" on page 1-96 and ADMIN PROGRAMMING).

CONDITIONS

- When a Group Name has been programmed, the following conditions exist when the specified call type is answered:
  - Answered incoming CO Calls **-**the group name appears on the first line of the display (instead of "LINE RINGING").
  - Answered incoming ICM Calls - the group name appears on the third line of the display (instead of "HUNT CALL").
- The maximum length of a Hunt Group Name is 12 characters. Displayed group names are truncated if they exceed the length of the LCD field/line.
- If a group name is not assigned, the group number will be displayed instead.
- Ring/Hunt group name not supported for external voice mail groups

ADMIN PROGRAMMING

Set Circular/Terminal Group

Hunt Group Name Assign -- used to establish a name for the Hunt Group. When an incoming CO line call is established with the Hunt Group, the Hunt Group name will display on the 1st LCD field. When an intercom call is established with the Hunt Group, the Hunt Group name will display on the 3rd LCD field.	PGM 191 + FLEX 18 + Value + [HOLD/SAVE]	VALUES -- max. of 12 characters

Set Ring Group

Hunt Group Name Assign -- used to establish a name for the Hunt Group. When an incoming CO line call is established with the Hunt Group, the Hunt Group name will display on the 1st LCD field. When an intercom call is established with the Hunt Group, the Hunt Group name will display on the 3rd LCD field.	PGM 191 + FLEX 15 + Value + [HOLD/SAVE]	VALUES -- max. of 12 characters

Set UCD Group

Hunt Group Name Assign -- used to establish a name for the Hunt Group. When an incoming CO line call is established with the Hunt Group, the Hunt Group name will display on the 1st LCD field. When an intercom call is established with the Hunt Group, the Hunt Group name will display on the 3rd LCD field.	PGM 191 + FLEX 23 + Value + [HOLD/SAVE]	VALUES -- max. of 12 characters

Set Voicemail Group

Hunt Group Name Assign -- used to establish a name for the Hunt Group. When an incoming CO line call is established with the Hunt Group, the Hunt Group name will display on the 1st LCD field. When an intercom call is established with the Hunt Group, the Hunt Group name will display on the 3rd LCD field.	PGM 191 + FLEX 7 + Value + [HOLD/SAVE]	VALUES -- max. of 12 characters

Set NetVM Group

Hunt Group Name Assign -- used to establish a name for the Hunt Group. When an incoming CO line call is established with the Hunt Group, the Hunt Group name will display on the 1st LCD field. When an intercom call is established with the Hunt Group, the Hunt Group name will display on the 3rd LCD field.	PGM 191 + FLEX 1 + Value + [HOLD/SAVE]	VALUES -- max. of 12 characters

Incoming Call Pickup

CO Line Name

This feature provides the ability to identify each CO line by giving it a "name".When a CO line is assigned a name, the name will appear on station displays when the CO line is accessed.

CONDITIONS

- SMDR reports will not use the CO line name. Instead, it uses the associated CO line number.
- Each CO Line name can contain up to 12 characters.
- If the CO Line Name Display disabled, the CO Line name will not be displayed.

ADMIN PROGRAMMING

Enable/Disable CO Line Name Display

CO Line Name Display -- if value is set to ON and the CO line name is assigned, the name displays on the station LCD when the station receives an incoming CO call through the CO Line.	PGM 142 + FLEX 1 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Assign CO Line Name

CO Line Name Assign -- designates the name of the CO line.	PGM 142 + FLEX 2 + CO Line Name (see Keyset Map on page D-50) + [HOLD/SAVE]	VALUES -- max. of 12 characters

Customer Call Routing (CCR) with Voice Mail

Using Direct Inward Dialing and Direct Inward System Access (DID/DISA), Customer Call Routing (CCR) is feature allows a caller to reach a destination within the system by pressing only one digit. When voice mail is set up for CCR, callers will hear the voice mail announcement that gives them a choice of destinations (that is, the caller may select a destination based on the information presented in the announcement).

CONDITIONS

- To use this feature for DID, voice mail should be assigned for Flexible DID Destination (see ADMIN PROGRAMMING).
- The CCR feature is only supported for DID and DISA.

- A user also may access the appropriate destination directly by dialing the station, Hunt Group number, or voice mail announcement.
- If a caller:
  - enters a digit associated with a voice mail announcement, the announcement is played. When the user presses the digit again, call routing is initiated.
  - dials a full destination number, the call will be directly routed to the appropriate destination by the system numbering plan.
  - enters one digit then pauses, the system will compare the dialed digit to the CCR Table. If a matching digit is found on the CCR Table, and the bin number is the same as the programmed voice mail announcement, the call will be routed to that destination.
  - enters an invalid digit, they can attempt to redial up the correct number(s) a total of three times. When the DISA Retry Counter is exceeded, the call will be routed to the recall destination or disconnected following an error tone. The DISA Retry Counter is programmable (see ADMIN PROGRAMMING).
  - dials, and is routed to, a destination that is busy, the call is rerouted to busy destination (see ADMIN PROGRAMMING).
  - does not dial a destination before the DISA retry count has expired, or if the dialed destination is invalid, the call is rerouted to the Time Out /Error destination (see ADMIN PROGRAMMING).
  - dials, and is routed to, a destination that does not answer, the call is rerouted to the No-Answer destination (see ADMIN PROGRAMMING).
- Voice mail announcements 01-70 may be used for CCR.
- The maximum CCR depth is 10.
- An external caller can dial alternate digits during the voice mail announcement or within the Inter-digit Time (5 sec) after the announcement has ended.
- During CCR, a caller can press:
  - # to return to the beginning of CCR.
  - * to return to the previous action within CCR.
- If VMIB Drop is selected in the CCR Table, the call will be dropped immediately after the voice mail announcement.
- If a call is routed through System Speed Dial, the call will be routed to the corresponding Speed Dial destination. If a CO Call is assigned a System Speed Dial number, it will be routed in the same way as an "Incoming CO Off-net Call Forward" call.
- The current CCR voice mail announcement (current depth) will be repeated until the DISA "retry count" expires unless the caller presses digit, the destination is determined to be busy, or an error occurs. The CCR announcement retry count is determined by each CCR announcement depth.

- Each voice mail announcement must be assigned a value within the CCR table. Of the system announcement (01) isn't assigned any value in the CCR table, the call will be routed to the designated DID/DISA destination. See ADMIN PROGRAMMING.
- To set up the voice mail prompt option, see ADMIN PROGRAMMING.
- If there is no answer at a destination station and the DID/DISA No-Answer timer expires, the call is routed to the designated No-Answer destination, and ignores the retry count (see ADMIN PROGRAMMING).

ADMIN PROGRAMMING

Program Flexible DID Table

Use PGM 231 … see page 1-125.

Program DID Digit Conversion Table

DID Digit Receive No. -- value is used to count received DID digit numbers for routing incoming DID calls.	PGM 146 + FLEX 5 + 3 (Value) + [HOLD/SAVE]	VALUES -- 2-4 digits
DID Digit Mask -- when DID Conversion Type (PGM 143 - FLEX 4) is set to 0, the received DID digits are converted by this value. (Ex., '1234' is received when DID Digit Mask is set as '#8**,' the digit is converted as '834').	PGM 146 + FLEX 6 + Value (4 digits, Range = 0-9)+ [HOLD/SAVE]	VALUES -- Default = #*** # = ignore received digit * = bypass the digit

Set DISA Retry Counter

Use PGM 160, then FLEX 4 … see page 1-130.

Set CCR Inter-digit Timer

CCR Inter-digit Timer -- used for the CCR inter-digit timer in the DISA/DID CO line. In DID type 2, it is used for the DID inter-digit timer.	PGM 180 + FLEX 15 + 030 (100ms, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-255

Set Inter-digit Timer

Use PGM 181, then FLEX 8 … see page 1-147.

Set DID/DISA Destination

Use PGM 167 … see page 1-124.

Enable VMIB Prompt Usage option

VMIB Busy Prompt Usage -- if value is set to ON, the Busy announcement will be presented to the caller before the call is routed to Busy Destination.	PGM 167 + FLEX 5 + FLEX 1 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
VMIB Error Prompt Usage -- if value is set to ON, an Error announcement will be presented to the caller before the call is routed to the Error Destination.	PGM 167 + FLEX 5 + FLEX 2 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
VMIB DND Prompt Usage -- if value is set to ON, a Busy announcement will be presented to the caller before the call is routed to the Busy Destination when the original destination is in DND mode.	PGM 167 + FLEX 5 + FLEX 3 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
VMIB No Answer Prompt Usage -- if value is set to ON, the No Answer announcement will be presented to the caller before the call is routed to the No Answer Destination.	PGM 167 + Flex 5 + FLEX 4 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
VMIB Attendant Transfer Prompt Usage -- if value is set to ON, the Attendant Transfer announcement will be presented to the caller before the call is routed to the Attendant.	PGM 167 + FLEX 5 + FLEX 5 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Program Custom Call Routing (CCR) Table

Use PGM 228.

1. Associate the CCR Table 01 with the appropriate voice mail announcement number.
2. Press [FLEX 1] to associate the appropriate department (such as Sales Department).

   NOTE: The flex button number should be the same as the dialing digit number.
3. Press 02 to select Destination Type as Hunt Group, then enter the appropriate Hunt Group Number (620).
4. Press [FLEX 2] to associate the next appropriate department (such as Tech Support).
5. Press 03 (VMIB) or 04 (VMIB Drop) to set the associated voice mail destination type, then enter the Announcement Number (02).

   NOTE: If VMIB type 2 (VMIB) is selected, the call will be routed to the associated department (e.g., Tech Supp). However, if type 3 (VMIB Drop) is selected, the call will be dropped immediately after the voice mail announcement is played.
6. Press [FLEX 10] to set it for the Attendant or Operator.
7. Press 1 to select the destination type as a station by dialing, then enter the appropriate station number (101).

Set Flexible DID Table

Use PGM 231 … see page 1-125.

Set Destination Type

Use PGM 228, enter the appropriate ranges, then follow the specific procedure as listed:

- CCR Table Number (Range = 01-70)
- Bin Number (Range = FLEX 1-FLEX 13)
- Destination Type (Range = 01-14)

Unassigned Destinations --	PGM 228 + FLEX 1-10	VALUES --
Busy Destination -- if the caller dialed a busy number, the call will be routed to the Busy Destination (Tone / Attendant / Hunt / VMIB).	PGM 228 + FLEX 11 + FLEX 2 Value + [HOLD/SAVE]	VALUES -- FLEX 1 = Tone FLEX 2 = Attendant (Ring Assign) FLEX 3 = Forward to Hunt Group FLEX 4 = VMIB Announce (001-070 Adm)
Error/Time Out Destination -- if the caller dialed an invalid number, the call will be routed to the Error Destination (Tone / Attendant / Hunt / VMIB).	PGM 228 + FLEX 12 + FLEX 2 Value + [HOLD/SAVE]	VALUES -- FLEX 1 = Tone FLEX 2 = Attendant (Ring Assign) FLEX 3 = Forward to Hunt Group FLEX 4 = VMIB Announce (001-070 Adm)
No Answer Destination -- if the destination does not answer, the call will be routed to the No Answer Destination (Tone / Attendant / Hunt / VMIB).	PGM 228 + FLEX 13 + FLEX 2 Value + [HOLD/SAVE]	VALUES -- FLEX 1 = Tone FLEX 2 = Attendant (Ring Assign) FLEX 3 = Forward to Hunt Group FLEX 4 = VMIB Announce (001-070 Adm)

CCR DESTINATION DIGIT / TYPE	VALUE
01) Station -- if the CCR destination type is the Station, the call will ring at the designated Station.	Sta #
02) Hunt Group -- if the CCR destination type is the Hunt Group, the call will ring at the designated member Station in the group.	Hunt #
03) VMIB Announce -- if the CCR destination type is the VMIB, the designated VMIB announcement will be played to the caller.	Announce #
04) VMIB Announce and Drop -- if the CCR destination type is the VMIB DROP, the designated VMIB announcement will be played to the caller and the call will be disconnected after the VMIB announcement.	Announce #
05) System Speed -- if the CCR destination type is the System Speed, the call is routed to the system speed telephone number.	2000-2499

CCR DESTINATION DIGIT / TYPE	VALUE
06) Internal Page -- if the CCR destination type is the Internal Page, the call can page to the designated internal page zones.	01-10
07) External Page -- if the CCR destination type is the External Page, the call can page to the designated external page zones.	1
08) All Call Page -- if the CCR destination type is the All Call Page, the call can page to all page zones.	1: INT All Page 2: All Page
09) Net Number -- If the CCR destination type is set to this value, the call will be routed to the network.	Net Number
10) Conference Room -- if the CCR destination type is set to this value, the call will be routed to the Conference room.	1-9
11) Station Voice Mailbox -- if the CCR destination type is set to this value, the call will be routed to the station mailbox.	STA #
12) Company Directory Request -- if the CCR destination type is set to this value, the call will be routed to the company directory.	Off (default)
13) Mailbox Owner -- if the CCR destination type is set to this value, the call will be routed to the mailbox owner.	Flex 01-13 (unassigned)
14) Record System Prompt -- if the CCR destination type is set to this value, the caller will be prompted to enter a system greeting number and password.	001-070 via Admin 01-70 via Remote

Program DISA and CCR, CO Service Type, and Set VM Message number

DISA CCR (use PGM 140)

1. Be sure CO Service Type is set to Normal.
2. Press [FLEX 1].
3. Be sure the DISA Service is set to ON.
4. Press [FLEX 2].
5. Set VMIB Message Number to 01 PGM 140, then press [FLEX 2].

DID CCR

1. Be sure CO Service Type is set to DID/MSN.
2. Press [FLEX 1].
3. Use at (PGM 146) to be sure the DID Digit Receive Number is set to 3.
4. Use PGM 143 to set DID Conversion Type as 2 (using Flexible DID Table).
5. Press [FLEX 4].
6. Set the Destination Type as 3 (VMIB).
7. Use PGM 231 to select Announcement Number 01 for the Flexible DID Table.

Direct Inward Dialing (DID)

This feature allows incoming CO calls to access a specific destination. This feature enables a caller to have direct access to specific station, Hunt group - bypassing any attendant.

There are 3 types of DID dialing that can be set (see ADMIN PROGRAMMING):

- **0** - sets a series of digits for the caller to dial, then converts them using the Conv Type.
- **1** - uses incoming DID digits as the destination number, so no conversion is needed.
- **2** - uses the Flexible DID table to convert the digits from the Conversion Type 1.

CONDITIONS

- When a DID call is received at a busy station, the call is automatically handled according to the DID/DISA Answer Timer.
- The DID Destination can be a station, Hunt group, voice mail announcement, "Drop after" voice mail announcement, System Speed, Internal Page, or Page (Internal/External/All Call Page).
- If the call is not answered or the number dialed is invalid, the call is routed using the DID/DISA Destination.
- DID calls to a busy station can be forwarded to another station - see “Call Forward” on page 1-175.

ADMIN PROGRAMMING

Set DID Conversion Type

DID Conversion Type -- when CO Service Type is set to ISDN DID/MSN (PGM 140), the value is used to designate the DID digit conversion type. - If conv type is set to 0, incoming digits are converted as set in PGM 146. - If conv type is set to 1, no digit conversion exists. If the caller dials a valid Station number, the Station will receive the call. - If conv type is set to 2, it refers to the Flexible DID Table (PGM 231).	PGM 143 + FLEX 4 + 0 (Conversion Type) + [HOLD/SAVE]	VALUES -- 0 = Convert digits by DID Digit Conversion 1 = No digit conversion 2 = Convert digits by Flex DID Table

Set DID Digit Conversion Mask

Use PGM 146, then FLEX 6 … see page 1-119.

Select Automatic Speaker

Auto Speaker Select -- If this value is set to ON, the station user can access a CO line or make a DSS call by pressing the appropriate {CO} or {DSS} button without lifting handset or pressing the [SPEAKER] button.	PGM 111 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set DID/DISA Destination

Busy Destination -- when there is a DID/DISA incoming call, if the caller dialed a busy destination, the call will be routed to the Busy Destination (Tone/Attendant/Hunt).	PGM 167 + FLEX 1 + FLEX 1 + [HOLD/SAVE]	VALUES -- FLEX 1 = Tone FLEX 2 = Atd (Ring Assign) FLEX 3 = Fwd to Hunt Grp
Error Destination -- when there is a DID/DISA incoming call, if the caller dialed an invalid number, the call will be routed to the Error Destination (Tone/Attendant/Hunt).	PGM 167 + FLEX 2 + FLEX 1 + [HOLD/SAVE]	VALUES -- FLEX 1 = Tone FLEX 2 = Atd (Ring Assign) FLEX 3 = Fwd to Hunt Grp
No Answer Destination -- when there is a DID/DISA incoming call, if the destination does not answer, the call will be routed to the No Answer Destination (Tone/Attendant/Hunt).	PGM 167 + FLEX 3 + FLEX 1 + [HOLD/SAVE]	VALUES -- FLEX 1 = Tone FLEX 2 = Atd (Ring Assign) FLEX 3 = Fwd to Hunt Grp
DND Destination -- when there is a DID/DISA incoming call, and the station is in DND or in Pre-Selected MSG SET state, the calling station will hear a busy tone or will be routed to an Attendant or Hunt Group.	PGM 167 + FLEX 4 + Value + [HOLD/SAVE]	VALUES -- FLEX 1 = Tone FLEX 2 = Atd (Ring Assign) FLEX 3 = Fwd to Hunt Grp

Enable DID Call Wait

DID Call Wait -- if this value is set to ON, another DID call could be received at the busy station.	PGM 114 + FLEX 17 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable DID Restriction

DID Restriction -- if this value is set to ON, the station is restricted from receiving DID incoming calls.	PGM 114 + FLEX 16 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Flexible DID Table

A maximum of 1000 Flexible DID Table entries can be programmed, each has five attributes.

1. Press [TRANS/PGM] button and dial 231.
2. Press FLEX 1 (enter Value, FLEX 1 = Input, FLEX 2 = Initial, FLEX 3 = Delete).
3. Enter DID Conv Table number (Range = 000-999) and follow specific procedure:

DID Name -- used to save the name of incoming DID calls, and display incoming DID call information at the Station LCD.	PGM 231 + FLEX 1 + DID Conv Table (Value) + FLEX 1 + Name (see Keyset Map on D-50) + [HOLD/SAVE]	VALUES -- Range = 000-999
Day Destination -- used to set destination when routing DID calls during the day ring mode.	PGM 231 + FLEX 2 + Destination Type (Range = 01-11) + [HOLD/SAVE]	VALUES -- Destination Type 1 = Station # 2 = Hunt # 3 = VMIB 00-70 (00, not assigned) 4 = VMIB 01-70 Drop (not assigned) 5 = Speed Bin (2000-2499) 6 = Internal Page (1-5) 7 = External Page 8 = All Page (1-2, INT / ALL) 9 = Net Number (Network Sta #) 10 = Conference Room (1-9) 11 = Station Voice Mailbox (Sta #)
Night Destination -- used to set the destination, when routing DID calls during night ring mode.	PGM 231 + FLEX 3 + Destination Type (Range = 01-11) + [HOLD/SAVE	VALUES -- refer to VALUES in Day Destination
Weekend Destination -- used to set destination when routing DID calls during weekend ring mode.	PGM 231 + FLEX 4 + Destination Type (Range = 01-11) + [HOLD/SAVE]	VALUES -- refer to VALUES in Day Destination

Lunch Destination -- used to set destination when routing DID calls during lunch ring mode.	PGM 231 + FLEX 5 + Destination Type (Range = 01-11) + [HOLD/SAVE]	VALUES -- refer to VALUES in Day Destination
Reroute Destination -- used to set 2nd destination, when routed DID call destination is busy.	PGM 231 + FLEX 6 + Destination Type (1-7) + [HOLD/SAVE]	VALUES -- 1 = Station # 2 = Hunt # 3 = VMIB 00-70 (00 not assigned) 4 = VMIB 01-70 Drop (not assigned) 5 = Speed Bin (2000-2499) 6 = Net Number (Network Sta #) 7 = Station Voice Mailbox (Sta #)

OPERATION / SETUP

To make a DID call by DID Digit Conversion:

1. Set the DID Digit Receive Number (for this example, set it to 3).
2. Set the DID Conversion Type to 0, then press enter digits to be used:
   # = ignore the number
   0 to 9 = the number will be converted to this digit
   * = is a "wildcard": the number in this location doesn't matter

   EXAMPLE: If you enter #1**, the first number will be ignored, the second number will be converted to a 1, and the third and fourth digits won't matter. So, a number entered as 1600 will be converted to 1100.

To make a DID call using the Flexible DID Table:

1. Set the DID Digit Receive Number (the number of digits the system will recognize).
2. Set the DID Conversion Type to 2.
3. Program Flexible DID Table as appropriate.

DID Call Routing with Incoming CLI

An incoming DID destination can be associated with the incoming CLI. If a CLI number is registered and assigned a destination within the Incoming CLI Destination Table, all DID calls with this CLI will be routed to the corresponding destination.

CONDITIONS

- This feature is supported only when the CO type is set as DID.
- This feature is executed first, when system receives a DID call with CLI.

- The ICLID Table (Incoming CLI Destination Table) has two fields, one is the CLID field, and the other is the Destination Index field. The Destination Index field represents an index number within the DID Conversion Table (PGM 231).
- If the CLI from an external call matches the number in the CLID field, the call is then cued to reference the Destination Index field. It will then reference the registered destination of the index from the DID Conv Table.
- The ICLID Table is an auto-sorted table. Therefore, when the CLI and Conv Table index number are entered, they are saved and automatically sorted.
- If a saved CLI number is the same as that in another field's CLI, the system changes corresponding the Conv Table index field.
- If a CLI field is erased, the Conv-Table index will also be erased.
- The ICLID Table can be initialized (see ADMIN PROGRAMMING).
- If the ICLID Usage option of a CO line is disabled, the CO line will not be checked against ICLID tables. Only a CO line with the ICLID Usage option enabled, can be associated with the ICLID feature.
- An asterisk (*) can be used as a "wildcard" digit in the CLI field. If a wildcard is associated, only registered numbers before the wildcard (*) will be compared to the received CLI number. If all numbers before the wildcard match, the corresponding call will be handled via the ICLID feature.
- A call can be rerouted to a destination according to the incoming CLI:
  - This call will be analyzed with ICLID Table.
  - If the CLI of this call matches a registered CLI field, then the system references the DID Conv Table with the saved index.
  - This call will be delivered to the specific destination designated by the ICLID Index Table.

ADMIN PROGRAMMING

Set Incoming CLI and Index Tables

CLI Number -- user can register CLI number.	PGM 237 + FLEX 1 + enter CLI number + [HOLD/SAVE]	VALUES --
Conversion Table Index -- user can assign Index Table number.	PGM 237 + FLEX 2 + Value (Index Table Number) + [HOLD/SAVE]	VALUES -- 001-100

Apply ICLID Features

ICLID Table Usage -- if value is set to ON, ICLID service is available. An incoming call is routed to the programmed destination by CLI information. Destination can be programmed in PGM 237 (Incoming CLI Destination Table)	PGM 143 + FLEX 18 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Access the DID Conv Table

Use PGM 231 … see page 1-119.

Initialize the ICLID Table

Tables Initialization -- LCR TABLE INITIALIZATION (PGM 223) By using PGM 223, the tables which are related to LCR feature can be initialized.	PGM 450 + FLEX 11	Also used for: PGM 227 - 229 and PGM 232 - 237

DID/DISA Call Routing for Station in DND or Pre-selected Message Mode

A DID/DISA call can be routed (forwarded) to a specific destination when a called station is in DND or in Pre-selected message mode.

There are three destinations available for re-routing the call:

- Tone - caller will hear a busy tone.
- Attendant - caller will be routed to the attendant
- Hunt Group - call will be routed to a designated hunt group

CONDITIONS

- The flow is the same for DID/DISA as the other destinations set for DID call routing (see 1-123).
- If [P-MSG DND] Admin is enabled, rerouted flow is the same as Busy. However, if [P-MSG DND] Admin is disabled, the route operation doesn't work even though the station is Pre-Selected MSG state.
- If calls routed to a hunt group, hunt group rules will be applied - see 1-96.

ADMIN PROGRAMMING

Reroute Calls for Tone

Use PGM 167, FLEX 4, then FLEX 1 … see page 1-124.

Reroute Calls to Attendant

Use PGM 167, FLEX 4, then FLEX 2 … see page 1-124.

Reroute Calls to Designated Hunt Group

Use PGM 167, FLEX 4, then FLEX 3 … see page 1-124.

Direct Inward System Access (DISA)

Like DID, the DISA feature allows incoming CO calls to access a specific destination, bypassing the Attendant station. However, unlike DID, there is no digit conversion in DISA.

Instead of digit conversion, upon detection of an incoming call on a CO Line, the system plays the pre-recorded voice mail announcement or sounds a dial tone. The caller can then dial additional digits to access the appropriate destination (station, hunt group, etc.).

CONDITIONS

- You can use a voice mail announcement instead of the intercom dial tone on a DISA line.
- When the DISA Authorization Code is enabled:
  - for a DISA Line, a DND warning tone (or voice mail) announcement is sounded, guiding the user to enter the DISA Authorization Code, the dial tone then should be heard.
  - the Authorization Code should be entered to access an outgoing CO Line.
- When the DISA Authorization Code is matched with the:
  - Authorization Code of the station, the user can access the CO Line depending on STA COS & CO COS.
  - Authorization Code of system, it is determined by CO to CO COS and CO COS.
- When the DISA Authorization Code is disabled, permission is determined by CO to CO COS & CO COS.
- Each DISA Line may be assigned as full-time DISA or Night Mode Only.
  - A DISA assigned for Night Mode operates as a normal CO Line during Day mode.
- Use # when saving the voice mail announcement number to have the CO Line drop after the announcement is played.

ADMIN PROGRAMMING

Assign a CO Line Range to a DISA Line

DISA Service (Sub Attributes - Normal CO)	PGM 140 + FLEX 2 (VALUE 1) + FLEX 1 + VALUE 2	VALUE 1: Flex 1 = Day Flex 2 = Night Flex 3 = Weekend Flex 4 = On-Demand VALUE 2: 1 = On 0 = Off
DISA VMIB Announcement (Sub Attributes - Normal CO)	PGM 140 + FLEX 2 (VALUE 1) + FLEX 2 + VALUE 2 (00-70)	VALUE 1: Flex 1 = Day Flex 2 = Night Flex 3 = Weekend Flex 4 = On-Demand VALUE 2: VMIB Message Number 00-70 (00:not assigned)

1. Press PGM140 and enter CO range.
2. Press Flex 2 (Sub Attributes).
3. Select Flex 1 - Flex 4 (Day, Night, Week-end, On-Demand).
4. Press Flex 1 for DISA Service and select 0 for Off or 1 for Off.
5. Press Hold/Save.
6. Press Flex 2 for VMIB Announcement.
7. Enter 00-70 for the VMIB Greeting Assignment.
8. Press Hold/Save to store the setting.

Assign DISA Account Code

DISA Account Code -- if value is set to ON, when the incoming CO caller tries to access another CO Line by dialing a CO line access code, the caller will be prompted to enter an authorization code. This only applies when the CO Service type is DISA.	PGM 141 + FLEX 3 + Value (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set DISA Retry Counter

DISA Retry Counter -- when the DISA user fails to connect with a station or access a feature, the DISA user can retry other calls or features within the amount of times set on the retry counter. If the DISA user cannot make a connection within the designated counter amount, the call will be routed according to the DID/DISA destination (PGM 167).	PGM 160 + FLEX 4 + 3 (Retry Counter) + [HOLD/SAVE]	VALUES -- 0-9

Assign CO-to-CO COS

Use PGM 166 … see page 1-27.

Access Weekly Time Table

Use PGM 233 … see page 1-14.

Set DISA Restriction

DISA Restriction -- if value is set to ON, the station is restricted to receive the DISA incoming call.	PGM 114 + FLEX 10 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To use DISA Line Assignment:

1. Select the DISA Line you want to use.
2. When the tone or announcement sounds, dial appropriate station/ hunt group number.
3. After a connection with the system is made, dial the CO Access Code (see 1-146) to call outside of the system (that is, by securing a CO Line).

Preferred Line Answer (PLA)

This feature allows you to determine the order that calls will be answered if/when there are several CO Line calls (transferred, recalled, queued, or normal incoming call) coming into the system all at one time.

CONDITIONS

- The default setting for answer order is: 1st) Transferred Call, 2nd) Recalled Call, 3rd) Normal Incoming Call, and 4th) CO Line Queued Call.
- The Automatic Speaker Select feature should be enabled (see ADMIN PROGRAMMING).

ADMIN PROGRAMMING

Change Preferred Line Answer

Priority Line Answer (PLA) -- if value is set to ON, the station user can answer calls according to designated priority.	PGM 112 + FLEX 7 + VALUE (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable (PGM 173, to set PLA)

Set PLA Priority

PLA Priority Setting -- PLA priority is set exclusively for call handling in relation to Transferred Calls, Recalled Calls, Incoming Calls, and Queued Calls.	PGM 173 + FLEX 1, 2, 3, or 4 + [HOLD/SAVE] -- FLEX 1 + 1 FLEX 2 + 2 FLEX 3 + 3 FLEX 4 + 4	VALUES -- 1-4 Defaults: F1: XFER F2: REC F3: INC F4: QUE

Select Automatic Speaker

Use PGM 111, then FLEX 1 … see page 1-124.

OPERATION / SETUP

If there are multiple CO Calls ringing at a station and the call is answered at one of the stations, the call with the highest priority will automatically be answered first.

Ring Assignment

When a destination (station, hunt group, or voice mail announcement) with a designated Ring Assignment receives incoming CO line calls while on a call, a muted ring sounds to signal the user that a call is coming in.

CONDITIONS

- Any CO Line Ring Assignment can be programmed for multiple stations or all stations.
- And each ring to a station can be set for a delayed.
- The ring assignment is individually applied to ring modes (that is, Day, Night, Weekend, or On-demand) see ADMIN PROGRAMMING.
- Every CO Line must be assigned to an Attendant Station by default.
- Digital phone must have a CO or LOOP button in order to receive CO line calls.

ADMIN PROGRAMMING

Set CO Service Type

Normal CO -- used for Analog Lines or DISA Service.	PGM 140 + FLEX 1 + 1 + [HOLD/SAVE]	VALUES --
Reserved	PGM 140 + FLEX 1 + 2	(reserved)
ISDN DID / MSN -- used for VOIP Lines.	PGM 140 + FLEX 1 + 3 + [HOLD/SAVE]	VALUES --
Reserved	PGM 140 + FLEX 1 + 4	(reserved)
DCO DID -- used for E1 Lines.	PGM 140 + FLEX 1 + 5 + [HOLD/SAVE]	

Set CO Ring Assignment

Use PGM 144 … see page 1-13.

Access Weekly Time Table

Use PGM 233. … see page 1-14

Assign Hunt Group

Use PGM 190 … see page 1-98.

Universal Night Answer (UNA)

Universal Night Answer (UNA) allows any user, regardless of the pick-up group, to pick up incoming CO Calls when the Night Mode enabled.

If there's incoming CO Calls during Night Mode, Station B can pick up the call even though Station A and B do not belong to a pick up group.

CONDITIONS

- UNA feature is activated when the Ring Mode is set to "Night" - see 1-132.
- If the Night Answer Code is dialed from a station when there is no incoming CO call, an error tone sounds.
- The connected CO Line may be transferred or disconnected the same way Day Mode call handling is performed.
- If External Night Ringing is enabled, the call is routed to External Page by LBC1.

ADMIN PROGRAMMING

Enable Universal Night Answer

Universal Night Answer (UNA) -- if feature is set to ON, Universal Night Answer service is applied to this CO Line.	PGM 141 + FLEX 8 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable External Night Ring

Use PGM 160, then FLEX 7 … see page 1-95.

OPERATION / SETUP

To pick-up a call in Night Mode:

1. Go off-hook.
2. The intercom dial tone sounds.
3. Dial 569 (the Universal Night Answer code) to connect to the call.

IP Phone Reroute Service

SBX IP provides rerouting when IP phones (IP hard-phone and Nomad SP) are not available for any reason (such as the line being disconnected). When this occurs, the call is re-routed to voice mail or to a mobile extension.

CONDITIONS

- This feature is only available for IP phones.
- A Hunt group cannot be used as a re-routed destination.

ADMIN PROGRAMMING

Set Auto Forward to VMIB

Use PGM 113, then FLEX 2 and FLEX 14 … see page C-11 and page C-15.

Set the Forward to VMIB Timer

Use PGM 181, then FLEX 20 … see page C-15.

Reroute to a Mobile Extension

Use PGM 236 … see page 1-238.

ISDN Service

- The SBX IP system does not support BRI (Basic Rate Interface). Instead, the BRI provides two bearer channels and one data channel (2B+D); but Calling Line ID functionality, the same admin fields are used for ISDN.
- Calling Number and Called Number functions are supported. Calling Number services will be routed in the same way as Automatic Number Identification (ANI) calls using the DID route table.
- The rules and conditions of ANI are the same, and still apply to Calling Number service on ISDN lines.
- Called Number services will be routed using the DID route table.
- The rules and conditions of DID apply to ISDN Called Number service on ISDN lines.
  - The Bearer channels (B channels) transport voice information to and from the Central Office.
  - The Data channel (D channel) controls all signaling information for the bearer channels.

Calling Line Identification Presentation (CLI)

The phone number of the caller is the CLI. It may also be referred to as Caller ID. Both incoming and outgoing CO calls can be enabled to provide call information.

Incoming CLI Service

When a call comes into an SBX IP 320 station, the phone number of the caller appears on the station display.

CONDITIONS

- CLIP Display must be enabled before the incoming number can be displayed.
- If the CLI Name Display is enabled, and an incoming number matches data in the programmed station speed dial, the incoming number is replaced with the stored station speed dial data.
- If CLI Print is enabled, the incoming CLI can be printed to an RS-232C port.
- If a value is entered for the MY AREA CODE feature, and this value matches the start digits of the incoming CLI, then the matched digits are automatically removed.
- If a value is entered for the MY AREA PREFIX CODE, it can be used in conjunction with the "MY AREA CODE" feature.
- If the CLI MESSAGE WAIT is enabled, the unanswered CLI data is stored in the station's memory.
- Up to 12 digits can be displayed on SBX digital phones.
- Any stored CLI messages are not erased if the system is powered down for any reason (such as a power outage).
- CLI information is only available for digital and SLT phones that have a display.

ADMIN PROGRAMMING

Enable CLIP LCD Display

Calling Line Identification Presentation (CLIP) LCD Display -- if value is set to ON, the CLI is displayed on the station's LCD.	PGM 114 + FLEX 1 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable CLI Name Display

CLI Name Display -- if this field is ON, the system checks whether the received CLI matches with the speed dial data. If it matches, the speed dial name is displayed.	PGM 114 + FLEX 11 + 0 (Off)+ [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable CLI Message Wait

CLI MSG Wait -- if value is set to ON, the station can receive CLI messages from an incoming CO call, when the station doesn't answer.	PGM 114 + FLEX 4 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set My Area Code

My Area Code -- this value is used to set your area code. The combination of this value and PGM 200 - FLEX 10 is compared with the received CLI, and the received CO call can be judged the local call or the long distance call. This value is also used for outgoing CLI data, when a station makes an outgoing CO call.	PGM 200 + FLEX 9 + Value + [HOLD/SAVE]	VALUES --- max. 6 digits

Set My Area Prefix Code

My Area Prefix Code -- this value is used to set your area prefix code. (Normally zero value) The combination of this value and PGM 200 - FLEX 9 is compared with the received CLI, and the received CO call can be judged the local call or the long distance call. This value is also used for outgoing CLI data, when a station makes an outgoing CO call.	PGM 200 + FLEX 10 + Value + [HOLD/SAVE]	VALUES -- max. 4 digits

Outgoing CLI Service

When enabled, this feature sends calling information to any destination an SBX station dials.

NOTE: Whether or not the information is then displayed on the destination phone depends upon whether or not that phone has incoming CLI capability.

CONDITIONS

- When the Call Type is set to NATIONAL, the outgoing CLI is generated as a National Number.
- When a value is entered for the ISDN CLI of a station, the value entered is used as the CLI suffix when the outgoing CLI is generated.
- When a value is entered in the MY AREA CODE field, the entered value is used as the CLI prefix when the outgoing CLI is generate.

- If a value is entered for the My Area Prefix Code, it can be used in conjunction with the "MY AREA CODE" feature.
- When a value is entered in the CLIP/COLP Table, and the CLIP Table Index is set as the front entry number, it is used as the middle portion of CLI when the outgoing CLI is generated.
- If the CLI Restriction is enabled, CLI transmission is restricted.
- Any stored CLI messages are not erased if the system is powered down for any reason (such as a power outage).

ADMIN PROGRAMMING

Access CLIP/COLP Table

COLP Table -- the COLP table is used for outgoing CLI.	PGM 201 + COLP Table Bin Number (Range = 00-49) + Value 2 (up to 10 digits) + [HOLD/SAVE]	VALUES -- PGM 143 - FLEX 1 and 2

Access CLIP/COLP Table Index

COLP Table Index -- if value is set to 50, the CLI of this CO Line refers to PGM 114 - FLEX 5. If this value is set to 00-49, the CLI of this CO Line refers to the COLP Table (PGM 201).	PGM 143 + FLEX 1 + Value (00) + [HOLD/SAVE]	VALUES -- Range = 00-50
CLIP Table Index -- if value is set to 50, the CLI of this CO Line refers to PGM 114 - FLEX 5. If this value is set to 00-49, the CLI of this CO Line refers to the COLP Table (PGM 201).	PGM 143 + FLEX 2 + Value (00) + [HOLD/SAVE]	VALUES -- Range = 00-50

Set Call Type

Call Type -- used to set the call type of ISDN CO line CLI.	PGM 143 + FLEX 3 + 2 (National) + [HOLD/SAVE]	VALUES -- 0 = Unknown 1 = International 2 = National 3 = Not used 4 = Subscriber

Enable ISDN CLI of STATION

ISDN CLI STA -- used as outgoing CLI when outgoing CLI is active and CLI type is EXT (station).	PGM 114 + FLEX 12 + Value + [HOLD/SAVE]	VALUES -- Default = Logical Sta No.

Enable ISDN CLI Restriction

ISDN CLI Restriction -- if value is set to ON, the CLI information is restricted by PX.	PGM 114 + FLEX 14 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set My Area Code

Use PGM 200, then FLEX 9 … see page 1-136.

Set My Area Prefix Code

PGM 200, then FLEX 10 … see page 1-136.

CLI Message Wait

When a call comes into the system through an ISDN DID line, the CLI of the incoming call is displayed on the target station. If the caller disconnects before an Attendant or the target station answers, the CLI is stored in the CO Message Wait queue of the target station.

CONDITIONS

IMPORTANT: DID/MSN must be set as the CO service type.

- The total number of CLI Message Wait instances at one time on a single system is 500.
- CLI Message Wait information is only available for digital and SLT phones with a display.
- Any stored CLI Message Wait instances are not erased if the system is powered down for any reason (such as a power outage).
- If an incoming call is routed to a Ring Group, the CLI Message Wait pertains only to the first member of the Ring Group (see 1-112).
- When the call is routed to a member of a UCD/ Circular/ Terminal station group, the CLI Message Wait is provided to the first ringing station only (see 1-96).
- If the caller disconnects the call:
  - during a voice announcement, Message Wait information is not stored.
  - while a station is ringing (after the voice mail announcement), the Message Wait information will be stored at the first ringing station.
- CLI Message Wait follows the rule of the "Message Wait" feature: when a call comes in for Station A, the Message Wait information will be stored at Station A, even if the call is forwarded to another station.
- If there is no remaining Message Wait buffer, the following warning message prints out via RS-232C: "WARNING: CLI MESSAGE WAITING BUFFER FULL".

- If the CLI Number is programmed in the SPEED BIN No. Table with the "Name", and the CLI Name Display feature is enabled, then the name will be displayed on the target station. In addition, the user can press [CALLBK] to toggle between CLI number and name.
- A user can use the "all CLI delete" feature to delete all CLI messages from his station unless there is a voice mail message attached to one of them. The priority of Message Wait deletion is: VMIB Message Wait, then CLI Message Wait, then VM Group Message Wait
- If duplicate CLI message waits are left at a station (that is, repeated calls from the same caller), the CLI duplicate counter will appear with the Message Wait, with the time of the last message left the CLI message with the CLI duplicated counter (max 15) and the last call received.
- If CLI Print is enabled, the incoming CLI can be printed to an RS-232C port.
- Also see:
  - Message Wait and Call Back on page 1-64
  - Message Wait Indicator LEDs on page 1-65
  - Message Wait Indication (MWI) - SLT Feature on page 1-68.
  - Network Message Waiting Indicator (MWI) on page A-11.

OPERATION / SETUP

To retrieve a CLI Message Wait:

1. Press [CALLBK].

   The message contents (CLI number, date and time, the calling count from the same caller) appears on the display. The DATE appears according to the format set in ADMIN PROGRAMMING (for example, MM/DD or DD/MM). TIME is always displayed in 24-hour format.

   ```
   03434507902
   DATE TIME CNTxx
   ```

2. Use the Volume up/down buttons to display the previous/next message.

To delete the current CLI Message, and display the next one:

Press [CONF].

To delete all CLI messages:

1. Press [CALLBK].
2. Press [DND] and [HOLD].

To initiate a call back:

1. Press [HOLD].
2. The system will secure an available CO line in the first accessible CO group and dial the number.

To delete all CLI messages. at an Attendant station:

1. Press [TRANS/PGM], then enter 055.
2. Enter the station range, and press [HOLD].

To program the CLI as a SPEED BIN number:

1. When the Message Wait with the number you want to save as a SPEED BIN appears, press [SPEED].
   The display message changes to the station speed dial program.

```
ENTER SPEED BIN NO(001)
CLI MSG USED
```

2. Press a station speed bin number.
   -or-
   Press [HOLD/SAVE] to store the speed dial number.

CLI MESSAGE WAIT FEATURE SUMMARY

BUTTONS	CLI ACTIONS
[VOL UP/DOWN]	See next CLI message
[HOLD]	Make a recall according to CLI message
[CALLBK]	Toggle CLI message and SPEED Name
[SPEED] + Bin # + [CONF]	Store CLI message in SPEED dial bin
[CONF]	Delete current CLI message
[DND]	Delete all CLI messages
At ATD STA: [TRANS/PGM]+055	Delete all CLI messages at ATD station

ADMIN PROGRAMMING

Set Call Type

Use PGM 143, then FLEX 3 … see page 1-137.

CLI Transit

There are two types of CLI Transit: Original and Forward.

CONDITIONS

- Outgoing CLI is selected according to the CLI Transit Option setting and authorization code.
- Outgoing Call through DISA Line

  When the system receives an incoming DISA call with CLI, and then an Outgoing call is made, the outgoing CLI is selected depending on the situation:

Type of CLI for DISA call	DISA Account	Type of entered password	CLI provided to PSTN
CFW	ON	Personal Password	CLI of station that password is attached to
CFW	ON	System Password	CLI of Attendant
CFW	OFF	Without Authorization	CLI of Attendant
ORI	It does not matter	does not matter	Original CLI of external caller (if received)
ORI	It does not matter	does not matter	Original CLI of external caller (if received)
ORI	It does not matter	does not matter	Original CLI of external caller (if received)

- Walking COS

Dialed Password	CLI provided to PSTN
System password	CLI of Attendant
Personal password	CLI of station which password is attached to

- DID Destination is assigned to a SPEED Bin
- Incoming CO Off-Network CFWD.

Type of CLI	CLI provided to PSTN
CFW	CLI of Attendant
ORI	Original CLI of external caller (if it is received)

ADMIN PROGRAMMING

Enable CLI Transit Option

CLI Transit -- if value is set to ORI, the caller's CLI will be sent for CLI; otherwise, the call forwarding station's CLI is sent.	PGM 143 + FLEX 7 + 0 (CFW) + [HOLD/SAVE]	VALUES -- 0 = CFW, send CLI as call forwarding station's CLI 1 = ORI, send CLI as original caller's CLI

Enable CO Account feature

Use PGM 141, then Btn 9 … see page 1-21.

Enable Forced Station Account feature

Use PGM 112, then Btn 20 … see page 1-22.

Enable LCR Password feature

Use PGM 221, then Btn 6 … see page 1-157.

Calling Party Number (CPN) Service

In the case where the Calling Party Number (CPN) information for an ISDN incoming call has two elements, the SBX IP 320 provides an option that allows either of these elements to be displayed. Usually one element is the actual CPN, while the other element may be the transit CPN of the network.

CONDITIONS

- If the CPN value is set to 1, the Real CPN is displayed.
- If the CPN value is set to 0, the Transit Point CPN is displayed.

ADMIN PROGRAMMING

Select CPN Value

Double CLI Service (Calling Party Number Service) -- if value is 1, the real CPN is displayed. If this value is 0, Transit Point CPN is displayed.	PGM 143 + FLEX 15 + 1 (ORI) + [HOLD/SAVE]	VALUES -- 0 = Transit 1 = ORI

Linked Stations

Executive / Secretary Pairs

Stations within the system can be designated in pairs with one station assigned as "Executive", and the other as "Secretary". The purpose of this pairing is so that when the Executive station is busy or in DND, intercom and transferred calls can be automatically routed to the designated Secretary.

CONDITIONS

- The maximum number of Executive/Secretary pairs is six.
- One Executive station can be associated with multiple Secretary stations within the maximum pairs (six). In addition, one Secretary station can be assigned to multiple Executive stations within the maximum pairs (six).
- It is possible to link (in a "chain") assigned Executive/Secretary pairs with other pairs (within he maximum (six). This means that a Secretary can be the Executive station to another Executive/Secretary pair. If a Secretary station has its own designated Secretary station, and the associated Executive and the original Secretary station are both busy, calls are automatically forwarded to the second Secretary within the chain.

NOTE: Executive-Secretary (chains as described above) cannot be set up as a loop chain.

- If multiple Secretary stations are assigned to an Executive station, and the first Secretary station in the group is busy, calls are automatically forwarded to the next designated Secretary.
- If an Executive has multiple secretaries, a Secretary can forward a call to another Secretary. The Secretary cannot forward a call to the Executive.
- When the Executive station is busy or in DND, the designated Secretary station receives the CO call ring. However, when the Executive station is idle, the Executive station receive the CO call ring.
- When both Executive and Secretary are busy, Camp-On (see 1-38) or transferred calls, as well as messages, remain at the Secretary station. If the Secretary is part of a chain, the calls (as mentioned) will remain at the last designated Secretary within the chain.
- When the Executive station is in DND:
  - the Secretary station can use the Camp-On (see 1-38) feature to send the call to the Executive station.
  - the Secretary can use Camp-On (see 1-38) or transfer a call to another extension.
- If an Executive forwards calls to a non-Secretary station, calls to the Executive station will be routed to the designated forward-to station.

ADMIN PROGRAMMING

Enable Do Not Disturb

Use PGM 111, then FLEX 3 … see page 1-47.

Access Executive/Secretary Table

Executive/Secretary Assignment -- assigns two stations as an Executive/Secretary pair.	PGM 229 + FLEX 1 + Executive sta no. + Secretary sta no. + [HOLD/SAVE].	VALUES -- Default = Executive /Secretary pairs are not assigned

Enable CO Call To SEC

CO Call to Secretary -- enables/disables CO calls for the Executive to ring at the Secretary station.	PGM 229 + FLEX 2 + Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 On

Enable Call EXEC If SEC DND

Call Executive if Secretary is in DND -- enables/disables calls for the Secretary to ring at the Executive station, if the Secretary is in a DND state.	PGM 229 + FLEX 3 + Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 On

Set EXEC Grade

Executive Grade -- allows assignment of the Executive's grade.	PGM 229 + FLEX 4 + Value + [HOLD/SAVE]	VALUES -- Range 01-12

OPERATION / SETUP

To activate Executive/Secretary Transfer from the Executive's digital phone:

Press [DND/FWD].

To activate the Executive station's DND feature from the Secretary's digital phone:

1. Press [Trans/PGM], then the Flex Button.
2. Press [Trans/PGM], enter 55, then the Executive's extension number.

Linked-Pair Stations

Two stations can be linked together for use by a single user. By linking a digital phone with another station, the user can use them alternatively.

CONDITIONS

- The system will support 13 linked station pairs.
- A station can be only linked with one other station.
- For purposes of assigning features and the intercom station number, one station in a Linked-Pair is designated as a "Master" station, the other is the "Slave" station.
- The number used for stations in a Linked-Pair is the station number of the "Master" as assigned in ADMIN PROGRAMMING.
- The attributes of the second station (Slave) follow the attribute settings of the Master station (for example, settings for Day/Night COS, CO Warning Tone, CO Auto Hold, CO Call Drop, and Alarm).
- If both stations in a Linked-Pair are idle both linked stations ring when a CO call is received. However, if only one station in a Linked-Pair is busy when a CO call is received, the caller will hear a busy tone.
- Any time one of the stations in a Linked-Pair receives calls (including intercom, CO, DISA/DID, recall ring, or transfer), both stations ring.
- If one station in linked pair is in DND, call forward, or a pre-selected message display state, the other station in the pair automatically assumes the same state. Conversely, it is also true that if such a mode/state is cancelled/removed at one station in a linked pair, the cancellation/removal is automatically applied to other station in the pair.
- If one station in linked pair is busy:
  - "IN USE AT LINK STA" is displayed on the other station in the pair.
  - the other station in the pair does not ring for incoming calls.
- Linked-Pairs are automatically set to Tone mode regardless of the current intercom Answer mode setting of either station in the pair.
- One station in a Linked-Pair can call the other station by dialing the intercom number (which is the same for both stations when linked).
- Both CO and intercom calls can be transferred between Linked-Pairs.
- The following cannot be included in a Linked-Pair.
  - Doorboxes, DSS/BLFs, or ISDN phones
  - Attendant stations
  - Port blocked station

ADMIN PROGRAMMING

Set Up Linked Station Pairs

Linked Station Pairs -- review of the programmed linked station pairs can be accessed at flexible button 1 sub-menu. Registration and delete of the linked Station pairs can be set at flexible button 2 sub-menu. If linked pairs are assigned to a wired (DKT or SLT) and wireless station (WHTU), the wired Station should be assigned as the master Station. NOTE: When there are too many stations to see, you can scroll data using the Volume up/down key. - A max. of 4 Ranger phones can be supported on the BKSU & EKSU combination boards (for a maximum of 8 cordless phones per system). - The DECT Cordless Telephone can also be supported.	Review Linked Station Pairs: PGM 179 + FLEX 1 Linked Station Pair (View): PGM 179 + FLEX 2 + Master Station Number + Slave Station Number + [HOLD/SAVE] Linked Station Pair (Inutput): PGM 179 + FLEX 2 + Master Station Number (PGM NUMBER) + [SPEED] + [HOLD/SAVE]	VALUES -- FLEX 1 = View FLEX 2 = Input 100-131

Outgoing Call Access

Basic Access

Each station is allowed or denied access based on particular CO Lines or CO Groups.

CONDITIONS

- Station users may use flex buttons as a CO button or CO Group button, including the {POOL} and CO buttons to access CO lines. According to the Numbering Plan, station users can access individual CO Lines by dialing CO Access Codes as shown below:

FEATURE	DESCRIPTION	OPERATION METHOD	ACCESS CODES
Idle Line Access (88 + CO Line number)	Automatically selects the line number specified	Dial the idle Line Access Number (9), or press a CO Line button.	8801-8816
CO Group Access (8 + CO Group number)	Selects an idle CO Line from the corresponding CO Group.	Dial the CO Group Access number and a CO Group number, or press a CO Group button.	801-808

IMPORTANT: Unused CO Lines must be assigned to unused CO Group 9 to prevent being accessed by a station.

- A digital phone's CO Line, POOL button, or LOOP button must be in an idle state in order to access an incoming/outgoing CO Line.
- When Override 1st CO Line Group is enabled, and there is no available CO Line by dialing the CO Line group access code (9 or 0), the system searches for the next available CO Group until a CO Line is detected.
- While an error tone sounds when a station is not permitted to access a CO Line, such a station can still receive transferred CO Line calls.
- The CO Line choice (Round-robin or Last Choice) must be set in ADMIN PROGRAMMING).
- If the CO Line is BRI (see "ISDN Service" on page 1-134), when a user tries to access B1 the system changes the CO Line to B2 (if there is a B2 CO or CO button).
- The first CO Line group (00) is the directed line group, and can be used with the CO line (Private Line) button.

ADMIN PROGRAMMING

Set CO Line Choice

CO Line Choice -- when securing a CO Line in a CO line group, if the value is set to LAST CHOICE, the last available CO line will be seized; otherwise, CO lines are secured in line availability order.	PGM 160 + FLEX 3 + 1 (Last) + [HOLD/SAVE]	VALUES -- 0 = Avail Line Order 1 = Last Choice

Set Inter-digit Timer

Inter-digit Timer -- designates the maximum time between digits, before an error tone is provided.	PGM 181 + FLEX 8 + 05 seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20

Enable CO Line Group Access

CO Line Group -- stations can be assigned to access any of 24 CO line groups in the SBX IP.	PGM 117 + Value (Toggle) + [HOLD/SAVE]	VALUES -- Range = FLEX 01-24

Set CO Line Group

CO Line Group -- each CO Line must be a member of a CO Line Group; Groups may be assigned according to the CO type and Class-Of-Service.	PGM 141 + FLEX 1 + 01 (CO Line Group) + [HOLD/SAVE]	VALUES -- 00-25 Group 00 = private group Group 25 = not used group

Enable Override 1st CO Line Group

Override 1st CO Line Group -- if value is set to ON, when there is no available CO Line in the first CO Line Group, the system can access the next accessible CO Line Group.	PGM 161 + FLEX 3 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

General Access

Enter one of the following:

- 9 to access the first idle line in their CO group.
- 8801 to access CO Line 001 if it is idle.
- 801 to access the first idle CO Line in CO Group 1.

To access a CO Line from a digital phone:

1. Go off-hook.
2. Press the appropriate CO Line, {POOL} button, or CO button.

   -or-

   Enter the individual CO Line Access Code, CO Group Access Code, or the first CO Line Access Code from the accessible group.

To access a CO Line from an SLT:

1. Lift the handset.
2. Enter the individual CO Line, CO Group Access Code, or the first CO Line Access Code from the accessible group.

To access a CO Line Group:

1. Lift the handset.
2. Press 8 for the CO Group.
3. Enter the CO Group number.

To assign the CO button:

1. Press [TRANS/PGM], then a Flex button.
2. Press [TRANS/PGM], then ??.
3. Press [HOLD/SAVE] to store the setting.

Call Time Restriction

The Call Time Restriction feature is used to restrict the call time of outgoing CO calls. A User can set the Call Cut Off timer so that the call will automatically be disconnected when the set time expires.

CONDITIONS

- All parties on a time restricted call hear a warning tone 15 seconds before the call is disconnected.
- This feature can be assigned on a station-by-station basis.
- Time restrictions can be applied to outgoing CO calls only.
- When the Call Time Restriction is set for a particular station, that time remains in effect:
  - for calls on hold, as well as any calls that station transfers to any other station in the system.
  - even if the station participates in a conference that includes an outgoing CO line.

ADMIN PROGRAMMING

Set CO Call Time Restriction

CO Call Time Restriction -- if flag is set to ON, an outgoing CO call may be disconnected when Call Cut -Off Timer (PGM 113 - FLEX 12) expires.	PGM 112 + FLEX 3 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Call Cut-Off Timer

Call Cut Off Timer -- outgoing CO call time is restricted with this timer. A call is released automatically after this time. If this timer is set to 0, a call is not released automatically.	PGM 113 + FLEX 12 + 00 (Value) + [HOLD/SAVE]	VALUES -- 00-99 (mins)

CO Line Queuing

If a user hears a busy tone when trying to access a CO Line (indicating there are no available CO lines), the user can request a call back (queue call). When this done, the station is notified when a CO line becomes available.

CONDITIONS

- Multiple Callback requests (queues) may be placed for a CO Line.
- When a queued CO Line becomes available (idle), the station that has been queued the longest receives the call back first. This priority process continues until all queued stations have been notified as the CO line becomes available.
- If the waiting station is busy and the queued CO Line is available, the available CO Line will be directed to the next idle queued idle.
- If the waiting station is idle, the queued CO Line will give a call back signal to the station for 15 seconds. If the signal is unanswered, the queue is canceled and the next station in the queue receives the call back.
- A station can only queue for a single CO Line at a time. If the station makes another queue request for a CO Line, the previous queue request is canceled, and the newer one is activated. This also means that the user loses their place in the queue priority (see above notes).

ADMIN PROGRAMMING

Enable CO Line Queuing

CO Line Queuing -- when a station user receives a busy signal during an attempt to access a CO line, the user may request a call back (queued call) when the CO line is available. If this value is set to ON, the Station User will receive a call back from the CO line when one is available.	PGM 112 + FLEX 5 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

OPERATION / SETUP

To activate CO Line Queuing when a busy tone sounds:

1. Lift the handset.

   Hint: If an SLT phone is being used, perform a hook-switch then follow steps below.
2. Enter 556, or press [CALL BK].
   A confirmation tone sounds, replace the handset.
3. When the call back ring sounds to indicate an available CO line, lift the handset.
   The CO dial tone sounds.

CO Step Call - SLT Phones Only

The feature allows a station with a COS (Class of Service) that restricts dialing to be able to dial Emergency numbers that are programmed into the Emergency Service Call Table. Without the table entries, the station cannot make Emergency calls. .

OPERATION / SETUP

To use CO Step Call when trying to access a busy CO line:

Press [SPEED], then enter the last digit of the previously called number.

The previous call is terminated and a new call is established.

Emergency Call Service

An Emergency Service Code can be used regardless of lower station COS.

CONDITIONS

- An emergency call can be dialed by pressing an available CO Line at the station that is assigned to COS 7.
- If the dialed number for the Emergency Service Code is the same as a station number or LCR Table number (see 1-153), the call is still processed as an Emergency Call. The priority of the dialed number sent to external CO Line is: Emergency Call Code, then LCR Table, then Station Number.

ADMIN PROGRAMMING

Enable Emergency Service Call

Emergency Service Call -- a maximum of 10 emergency codes can be programmed. All stations, regardless of COS, can dial the emergency codes in this table	PGM 226 + Bin Number (Range = 1-10) + Value (max. 14 digits) + [HOLD/SAVE]	VALUES -- 0-9,#,*

Hot Line & Warm Line

If a user has stored a destination phone number, then the user can instantly make an outgoing call by lifting the handset, or by pressing the [ICM].

A Hot Line can be activated immediately when a station is in the off-hook state. A Warm Line can be activated after the Warm Line Timer has expired.

CONDITIONS

- A Hot Line or Warm Line destination can be either a CO Line or CO Line Group. This function can be setup on a flex button or at another station.
- If a user dials another number prior to the Warm Line Timer expiration, the call will be processed as a normal call, not as a Warm Line call.
- If there is no flex button at a station, the number is processed as a Speed Dial Number.
- The set value of the Warm Line Timer must be less than that of the Dial Tone Timer.
- A flex button may be assigned as an Idle Line Selection button.
- When lifting the handset or pressing the [SPEAKER], the system behaves as it would if a predefined button was pressed.
- It is possible to activate the Hot Line/Warm Line feature for an SLT station.

ADMIN PROGRAMMING

Set Warm Line Timer

Warm Line Timer -- designates the amount of time before a warm line state exists on an idle line after lifting handset or pressing the [SPEAKER] button.	PGM 182 + FLEX 8 + 05 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20

Enable Warm Line

Warm Line -- if value is set to HOT, the station user can use Hot Line. Otherwise, in the Warm Line state, the Warm Line Timer will start when the user lifts the handset or presses the [SPEAKER] button.	PGM 113 + FLEX 7 + 0 (Warm) + [HOLD/SAVE]	VALUES -- 0 = Warm 1 = Hot PGM 122

Set Idle Line Selection

Idle Line -- designates Hot Line or Warm Line.	PGM 122 + 1 (ITEM, refer to Table) + RANGE (1-4 digits, refer to table) + [HOLD/SAVE]	VALUES -- see table

ITEM	RANGE	FUNCTION
1 - Flex	01-44	To activate a feature on a flexible button.
2 - CO Line	01-12	To secure a CO Line.
3 - CO Line Group	01-24	To secure a CO Line Group.
4 - Station	100-131	To call another station

OPERATION / SETUP

To activate a Hot Line at a station where a Hot Line is assigned:

Lift the handset at a station to activate the feature.

*To activate **a Warm Line at a station where a Warm Line is assigned**:*

Lift the handset at a station.

The assigned Warm Line feature is activated if no dialing has been done while the Warm Line Timer is running.

Least Cost Routing (LCR)

When an outgoing CO call is made, the LCR feature automatically selects the least expensive method (route/carrier) to make the call. This eliminates the need for a user to know and enter the access code of the least expensive carrier.

CONDITIONS

- When a user selects a CO Line and dials a destination number, the system checks the LCR programming and sends the call according to the least cost route according to the ADMIN program.
- There are three ways to activate LCR:
  - **Internal LCR** - If the dialed digits match an internal LCR code (contained in the LCR table), the system secures a CO Line from the programmed CO Group, then sends the modified digits according to LCR programming.
  - **Loop LCR** - When dialing the first accessible CO Group Code (9 or 0), or when pressing the Loop button, then entering digits that match a COL LCR code, the system seizes the CO line from the designated CO group. At that point, the dialed digits the digits are converted by according to the LCR Table, and are sent.
  - **Direct CO LCR** - After dialing a CO Line or CO group code (9 or 0, depending on the country from which you are calling), or after pressing a CO Line or CO group button, LCR can be activated. If the dialed digits match a COL LCR code, the system seizes the CO line from the designated CO group. At that point, the dialed digits the digits are converted by according to the LCR Table, and are sent.
- There are 6 LCR modes.
- LCR Access Mode 00 (M00) disables LCR calls.
- Leading digits can be duplicated, since FLEX 2 and the DMT index make each entry unique.
- The Leading Digit table is sorted by leading digits if FLEX 2 is set to LDT (INT, COL, BOTH), and DMT index is selected.

- Internal LCR is applied if the dialed digits are matched with one of leading digits, and FLEX 2 is set to INT or BOTH.
- Loop LCR is applied if the dialed digits match one of the leading digits, and if FLEX 2 is set to COL or BOTH.
- Direct CO LCR is applied if the dialed digits match one of the leading digits, and if FLEX 2 is set to COL or BOTH. In addition, the secured CO Line must belong to the CO Group programmed in DMT.
- To use Loop LCR and Direct CO LCR differently with the same leading digits, there should be a leading digit entry for loop LCR before the leading digits for direct CO LCR. It is possible to set up for direct CO LCR if the DMT index for loop LCR is set to a smaller value than the DMT index.
- When direct CO LCR is applied to an ISDN CO, an ISDN Information message is sent to the network when a user dials a digit. The message contains the called party IE, and includes the numbering plan and numbering type. This information prevents the network from disconnecting the line.
- For direct CO LCR, leading digits must be programmed in consideration with the dial tone timing provided by the network.
- Direct CO LCR does not use an alternative DMT index when a CO Line is already accessed.
- LCR always takes higher priority than the Flexible Numbering Plan Table.
- LCR can be used in the following instances:
  - dialing after accessing a CO Line by dialing a CO Line access code (0 or 0) only
  - dialing after accessing a CO Line by pressing the CO button
  - dialing without accessing a CO Line
  - Speed Dialing
  - Off-net Call Forward
  - Redial (if the previous call used LCR)
  - ACNR (if the call used LCR to activating ACNR)
- Any leading digit string at the LDT table can be a sub-string of another leading digit string (such as 012 and 0123).
- Capacity for the LCR Table is as follows: three day zones and three time zones
- Additional maximum numbers:
  - dialed code bins: 250 bins
  - modification code bins: 100 bins
  - dialed digits: 12 digits
  - added digits: 25 digits
  - alternative DMT index: 1 ea

ADMIN PROGRAMMING

Set LCR Attributes

LCR Access Mode -- used to select the LCR access mode.	PGM 220 + FLEX 1 + Value (Range = 1-6) + [HOLD/SAVE]	VALUES -- 1 = M00 (Disable LCR, default) 2 = M01 (Only Loop LCR) 3 = M02 (Internal and Loop LCR) 4 = M11 (Loop and Direct CO LCR) 5 = M12 (Internal, Loop and Direct CO LCR) 6 = M13 (Internal, Loop, Direct CO and Direct Loop LCR)
Day Zone -- used to set up the LCR setting; each day can be grouped into up to 3 zones.	PGM 220 + FLEX 2 + Value1 + Value2 + [HOLD/SAVE]	VALUES -- Value1: FLEX 1 = Monday FLEX 2 = Tuesday FLEX 3 = Wednesday FLEX 4 = Thursday FLEX 5 = Friday FLEX 6 = Saturday FLEX 7 = Sunday Value 2 = Zone 1-3 (1 digit)
Time Zone 1 of Day Zone 1 -- each time of Day Zone 1 can use a different LCR setting; each time of Day Zone 1 can be grouped up to 3 zones. The time not belonging to any zone will be considered as Zone 1.	PGM 220 + FLEX 3 + FLEX 1 (Time Zone 1) + Value 2 + [HOLD/SAVE	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)
Time Zone 2 of Day Zone 1 -- each time of Day Zone 2 can use different LCR setting; each time of Day Zone 2 can be grouped up to 3 zones. The time not belonging to any zone will be considered as Zone 1.	PGM 220 + FLEX 3 + FLEX 2 (Time Zone 2) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)
Time Zone 3 of Day Zone 1 -- each time of Day Zone 3 can use different LCR setting; each time of Day Zone1 can be grouped up to 3 zones. The time not belonging to any zone will be considered as Zone 1.	PGM 220 + FLEX 3 + FLEX 3 (Time Zone 3) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)

Time Zone 1 of Day Zone 2	PGM 220 + FLEX 4 (Day Zone 2) + FLEX 1 (Time Zone 1) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)
Time Zone 2 of Day Zone 2	PGM 220 + FLEX 4 + FLEX 2 (Time Zone 2) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)
Time Zone 3 of Day Zone 2	PGM 220 + FLEX 4 + FLEX 3 (Time Zone 3) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)
Time Zone 1 of Day Zone 3	PGM 220 + FLEX 5 + FLEX 1 (Time Zone 1) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)
Time Zone 2 of Day Zone 3	PGM 220 + FLEX 5 (Day Zone 3) + FLEX 2 (Time Zone 2) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)
Time Zone 3 of Day Zone 3	PGM 220 + FLEX 5 + FLEX 3 (Time Zone 3) + Value 2 + [HOLD/SAVE]	VALUES -- FLEX 1 = Time Zone 1 FLEX 2 = Time Zone 2 FLEX 3 = Time Zone 3 Value 2 = Time: HH-HH (4 digits)

Access Leading Digit Table

- A maximum of 250 LDT entries can be programmed. Each LDT entry has six sub-attributes: LCR type, LCR code, DMT index for Day Zone 1/2/3, and Check Password.
- DMT Index -- Meaning of 6 digits: each pair (2 digits) is the index to the DMT for the each time Zone 1/2/3. (The [SPEED] button is used to validate the remaining index).
- Enter the appropriate VALUE (LDT Table, Range = 000-249) and follow the specific procedure as listed in the Table.

LCR Type -- used to select the LCR Type.	PGM 221 + FLEX 1 + 3 Value (LCR Type) + [HOLD/SAVE]	DEFAULT = Both VALUES -- 1 = INT (checks entry only for internal dialing) 2 = COL (checks entry only after dialing CO Access Code) 3 = BOTH (checks entry for both INT and COL)
LCR Code -- if digits dialed by the user are equal to determined value, the digits will be converted and a CO line will be secured according to DMT.	PGM 221 + FLEX 2 + Value (2 digits; 0-9, #, *) + [HOLD/SAVE]	VALUES -- max. 12 digits
DMT Index for DAY Zone 1 -- used to set the table index DMT of Day Zone 1. Because Day Zone 1 has three different time zones, all three table indices of each time must be selected.	PGM 221 + FLEX 3 + Value (DMT Index, 6 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
DMT Index for DAY Zone 2 -- used to set the table index DMT of Day Zone 2. Because Day Zone 2 has three different time zones, all three table indices of each time must be selected.	PGM 221 + FLEX 4 + VALUE (DMT Index, 6 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
DMT Index for DAY Zone 3 -- used to set the table index DMT (PGM 222) of Day Zone 3. Because Day Zone 3 has three different time zones, all table indices of each time must be selected.	PGM 221 + FLEX 5 + Value (DMT Index, 6 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
Check Password -- if value is set to ON, the SBX IP system will request the User account code when dialed digits match the LCR code.	PGM 221 + FLEX 6 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off (default) 1 = On

Access Digit Modification Table

- The Digit Modification Table (DMT) is used to convert the dialed digit and seize the outgoing CO line. In the SBX IP system, a maximum of 100 DMT entries can be programmed.
- Enter the appropriate VALUE (DMT Table, Range = 00-99) and follow the specific procedure as listed in the Table

Added Digit Stream -- this value is used to add digit stream for user dialed digits (refer to Add Position - PGM 222, FLEX4).	PGM 222 + FLEX 1 + Value (20 digits, 0-9,*,#) + [HOLD/SAVE]	VALUES -- [CALLBK] = Pause [DND/FOR] = Dial tone detection instead of pause enter [FLASH] = Station Number Billing code
Removal Position -- used to set the removal position for user dialed digits. Some digits will be removed from the designated position up to this amount.	PGM 222 + FLEX 2 + 01 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-12
Removal Position -- used to set the number of removal digits.	PGM 222 + FLEX 3 + 01 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-12
Add Position -- used to set the add position for user dialed digits. Some digits are added from the designated position with Add Digit Stream.	PGM 222 + FLEX 4 + 01 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-13
CO Line Group -- used when LCR calls secure the outgoing CO line. The idle CO line within CO Line Group of the determined value is seized for LCR calls.	PGM 222 + FLEX 5 + 01 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-24
Alternative DMT Index -- used when LCR calls are unable to seize an idle CO line within PGM 222 - FLEX 5, the LCR call will seize an idle CO within CO Line Group of this value DMT index.	PGM 222 + FLEX 6 + Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99

Set LCR Table Initialization

DMT of Day Zone 1 -- this changes the index of DMT value for day zone 1 to the new value.	PGM 223 + FLEX 1 + Value + [HOLD/SAVE]	VALUES -- Range = 00-99 (6 digits) Each pair (2 digits) is the index to the DMT for each time Zone 1/2/3.
DMT of Day Zone 2 -- this changes the index of DMT value for day zone 2 to the new value.	PGM 223 + FLEX 2 + Value + [HOLD/SAVE]	
DMT of Day Zone 3 -- this changes the index of DMT value for day zone 3 to the new value.	PGM 223 + FLEX 3 + Value + [HOLD/SAVE]	
CO Line Group -- this changes all CO Line Group values of DMT entry to the new value.	PGM 223 + FLEX 4 + Value + [HOLD/SAVE]	VALUES -- Range = 01-24 (2 digits)
ALT DMT Index -- this changes the all Alternative DMT Index values of DMT entry to the new value.	PGM 223 + FLEX 5 + Value + [HOLD/SAVE]	VALUES -- Range = 00-99 (2 digits)
Initialize All LCR -- this initializes all LCR Admin data to the default value.	PGM 223 + FLEX 6 + [HOLD/SAVE]	VALUES --

OPERATION / SETUP

To activate Internal LCR:

NOTE: An LCR Code is internal if the code is programmed as Internal or Both in the Leading Digit Table.

1. Lift the handset, or press the [SPEAKER].
2. Enter the internal LCR Code.

To activate Loop LCR:

NOTE: An LCR is a COL LCR code if the code is set as both COL or BOTH in the Leading Digit Table.

1. Dial the first accessible CO Line or CO Group access code (0 or 9), or press [Loop].
2. Enter COL LCR code

To activate Direct CO LCR:

An LCR is a COL LCR code if the code is set as both COL or BOTH in the Leading Digit Table.

1. Enter a CO or CO Group Access code, or press a CO or CO Group button.
2. Enter COL LCR code.

EXAMPLES

Example 1: Add Prefix Digit

The long distance call access code starts with 0 (for example, 02, 031, 051). If a less expensive carrier exists, the user can access it with the carrier access code 082, then the long distance access code - without using 0.

Of course, the System Administrator wants to use this cost effective carrier for all long distance calls (e.g., dial 0314502628, 082314504628).

PGM 220	PGM 221 (LDT)	PGM 222 (DMT)
LCR MODE MO1, M02, M11, M12 (Loop LCR enabled)	Bin 000 LCR TYPE: COL LCR CODE: 0 DMT: 00 00 00	Bin 00 Remove Position: 01 Remove Number: 01 Add Position: 01 Add Digit: 082

Example 2: Select CO group

In this example, the system is connected to two carriers (Carrier A and Carrier B). Carrier B is used for international calls (with the international call access code of 001), and Carrier A is used for all other calls.

PGM 141	PGM 117	PGM 161-3
Set CO Lines from carrier "A" to CO group 1. Set CO Lines from carrier "B" to CO group 2.	Enable access CO group 01, 02	Override 1st CO Group: OFF

PGM 220	PGM 221 (LDT)	PGM 222 (DMT)
LCR MODE MO1, M02, M11, M12 (Loop LCR enabled)	Bin 000 LCR TYPE: COL LCR CODE: 001 DMT: 00 00 00	Bin 00 CO Group: 02

Example 3: Make another CO Access Code:

In this example, the system has both VOIP CO lines and normal CO Lines. The System Administrator wants to access VOIP CO using code 7, and access normal CO Lines using code 9 (as the default CO Access Code).

PGM 106
Remove/change numbering plan which starts with "7".

PGM 141	PGM 117	PGM 161-3
Set normal CO Lines to CO group 1 Set VOIP CO Lines to CO group 2	Enable access CO group 01, 02	Override 1st CO Group: OFF

PGM 220	PGM 221 (LDT)	PGM 222 (DMT)
LCR MODE M02, M12, M13 (Internal LCR enabled)	Bin 000 LCR TYPE: INT LCR CODE: 7 DMT: 00 00 00	Bin 00 Remove Position: 01 Remove Number: 01 CO Group: 02

Example 4:Password for specific dial number:

The international access code is 001. The System Administrator requires the system password in order for international calls to be dialed.

PGM 220	PGM 221 (LDT)	PGM 222 (DMT)m
LCR MODE M12, M13 (LOOP/CO LCR enabled)	Bin 000 LCR TYPE: COL LCR CODE: 001 DMT: 00 00 00 Check Password: On	Bin 00 CO Group: 01

Memory Dialing

Auto Call Number Redial (ACNR)

The Auto Call Number Redial allows a busy or unanswered destination to be redialed a specific number of times.The system will retries the number based on the ACNR counter, and includes appropriate pauses in between each dialing attempt.

CONDITIONS

- The default setting is 3 (that is the system will redial a specific number three times before it stops trying).

- To use this feature on a digital phone, the phone must have a labeled [REDIAL] button or a programmed {Redial} flex key.
- To use this feature on analog CO Lines, Call Progress Tone Detection Units (CPTU) must be applied.
- When a predefined CO Line is busy in ACNR mode, an available CO Line within the same group is used.

ADMIN PROGRAMMING

Set ACNR Pause Timer

ACNR Pause Timer -- when the ANCR Pause Timer expires, ACNR is activated.	PGM 180 + FLEX 10 + 030 Seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 005-300

Set ACNR Delay Timer

ACNR Delay Timer -- designates the time delay when there is no available CO Line in the group.	PGM 180 + FLEX 8 + 030 Seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-300

Enable ACNR Tone Detect Timer (analog CO lines only)

ACNR No Tone Detect Timer -- when a call to a busy station is made, the CPTU attempts to detect the valid tone type until ACNR Tone Detect Timer expires.	PGM 180 + FLEX 13 + 030 Seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 001-300

Set ACNR No Answer Timer

ACNR No Answer Timer -- the system detects a CO ring back tone the CO. If the call is not answered, the system will disconnect the call.	PGM 180 + FLEX 9 + 30 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-50

Set ACNR Retry Counter

ACNR Retry Timer -- ACNR is executed up to this value. After the timer expires, ACNR is canceled.	PGM 180 + FLEX 11 + 03 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-30

Set ACNR Tone Cadence

Use PGM 423 … see page 1-243.

OPERATION / SETUP

To program a {Redial} flex button on a digital phone:

1. Press [TRANS/PGM], then the designated flex button (24 or 8 button only).
2. Press [TRANS/PGM], then 97.
3. Press {HOLD/SAVE] to store the setting.

To use ACNR while receiving a busy/no answer indication on a CO Line:

1. Press [REDIAL], then disconnect.
2. The system automatically retries the call as per the ACNR retry counter.
3. When the called party answers, lift handset, or press [MUTE].

To cancel ACNR:

Press the flashing [REDIAL], lift handset, or press [MUTE] (while a CO Line is accessed).

Last Number Redialing (Digital and SLT Phones only)

The last dialed number on a CO Line can be stored (up to 32 digits) in the station's Last Number Redial buffer. The user may then redial the last number on the system.

CONDITIONS

- Digital phones with a display can access a directory showing the ten last numbers dialed.
- When the used CO Line is busy, an idle CO Line in the group is accessed, and the last dialed number is dialed.
- Duplicated phone numbers are included in the last dialed number directory.
- Last Number Redial overrides Auto-redial.

ADMIN PROGRAMMING

Enable Speed Dial Access

Speed Dial Access -- if value is set to ON, the station user can use system speed dial to place a call.	PGM 112 + FLEX 9 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Enable CO Dial Tone Detect

Use PGM 160, then FLEX 6 … see page 1-30.

OPERATION / SETUP

To use Last Number Redial at a digital phone:

1. Go off-hook.
2. Press [REDIAL].

-or-

1. Press [SPEED], then *.
2. Press [HOLD/SAVE] to dial the associated number.

To use a recently dialed number in the Last Number Directory (a digital phone w/display):

1. Press the display scroll buttons to find the phone number to be dialed.
2. When the number to be dialed appears, press [HOLD/SAVE] to dial the number.

To use Last Number Redial on an SLT phone:

1. Go off-hook.
2. Enter 552, or press [REDIAL].

Save Number Re-dealing (Digital Phones only)

Any dialed number can be saved temporarily and used at any time. This number is saved until a new number is stored.

CONDITIONS

- When the used CO Line is busy, an idle CO Line in the group is accessed, and the saved number is dialed.
- Saved numbers are saved even if the system is powered down (e.g., a power outage).

OPERATION / SETUP

To save a number in the Save Number Redial buffer:

1. Press [SPEED] twice, while on a conversation with an external party.
2. Replace the handset or go on-hook.

To dial a number from the Save Number Redial buffer:

1. Go off-hook.
2. Press [SPEED].
3. Press # button.

To erase the save number redial bin:

4. Access a CO line, dial a number, then press [SPEED] twice.

Station Speed Dialing (Digital and SLT Phones only)

Each station can store up to one hundred frequently dialed numbers to be used for speed dialing.

CONDITIONS

- Up to 100 frequently used station numbers can be stored to Station Speed Bins (000-099). Station numbers can consist of up to 24 digits including pauses, Flash commands, pulse-to-tone switchover, and no-display characters (pause is automatically inserted after a flash).
- A CPTU must be installed for dial tone detection (refer to the SBX Installation Guide).
- When storing Station Speed Dial numbers in a digital phone:
  - the [DND/FWD] button can be used as Dial Tone Detect, if the CO Dial Tone Detect feature is enabled, and stored as the first or second digit. In addition, the accessed CO Line must be after the PBX mode.
  - the FLASH button functions as Flash to PX (or PBX), if the accessed CO Line is analog. If the accessed CO Line is ISDN line, and is stored as the first digit, FLASH sends the remaining digits with envelope information in keypad facility IE, rather than in the Calling Party Number IE.
- Station Speed Dial numbers are saved (in data protect mode) even if the system is powered down (for example, during a power outage).
- There can be a maximum of twenty-four digits in a station Speed Dial number (including special digits and function codes).
- An error tone sounds when an empty station Speed dial bin is dialed.
- If you select a CO Line before dialing a Speed Dial bin number, the selected CO Line overrides the CO Line programmed for the Speed Dial bin number.
- A station name (max. 12 characters) can be stored, and will be displayed instead of the user's station number. Since the name is programmed in Speed Dial bin 000, this bin cannot be used as a Station Speed Dial bin.

OPERATION / SETUP

To store Station Speed Dial numbers from a digital phone:

1. Press [TRANS/PGM], then press [SPEED].
2. Enter the Station Speed Dial bin (000-099) to be dialed.
3. Press the CO Line or Group button, if applicable.

4. Dial the appropriate telephone number, and include any of the following as needed:
   [CALLBK] = inserts a pause.
   button = if stored as the first digit, its function is to Display Security. Otherwise, its function is to change to Pulse (for DTMF Switchover).
   [DND/FWD] = for Dial Tone Detect or Pause (see **CONDITIONS**)
   [FLASH] = inserts a Flash into the speed number (see **CONDITIONS**).
5. Press [HOLD/SAVE] to complete the entry.

   Hint: At this point, the "Character Entry Chart" on page D-50 can be used to enter a name (max. 12 characters) as needed.
6. Press [HOLD/SAVE] to store the setting (including a name if used), and complete the dialing sequence. *To store continuously*, repeat this procedure from Step 3.

To delete a Station Speed Dial bin from a digital phone:

1. Press [TRANS/PGM], then press [SPEED].
2. Enter the Station Speed Dial bin (000-099) to be deleted.
3. Press [HOLD/SAVE] to delete the designated bin.

To make a call using Station Speed Dial from a digital phone:

1. Go off-hook.
2. Press [SPEED], then enter the Station Speed Dial bin (000-099).

To display and dial a Speed Dial bin by scrolling (digital phones with displays only):

1. Press [TRANS/PGM], then press [SPEED].
2. Enter the Station Speed Dial bin (000-099).
3. Use the display scroll buttons to display the next/previous Speed Dial number.

To store Station Speed Dial numbers from an SLT phone:

1. Go off-hook.
2. Enter 555 (the Speed Dial program code).
3. Dial the Station Speed Dial bin number (000-099).
4. Dial the appropriate phone number (up to 24 digits).
5. Perform a hook-switch to store the number.

To make a call using Station Speed Dial from an SLT phone:

1. Go off-hook.
2. Enter 558 (the Speed Dial access code).
3. Dial the Station Speed Dial bin number (000-099).

To clear Station Speed Dial numbers from an SLT phone:

1. Go off-hook.
2. Enter 555 (the Speed Dial program code).
3. Dial the Station Speed Dial bin number (000-099).
4. Perform a hook-switch to dial the number.

System Speed Dialing

The System Speed Dial bins are programmed by the System Attendant only. These numbers are available for easy access by all stations within the system.

CONDITIONS

- The maximum System Speed Dial capacity is 500.
- When storing System Speed Dial numbers from an Attendant Station (digital phone):
  - the [DND/FWD] button can be used as Dial Tone Detect, if the CO Dial Tone Detect feature is enabled, and stored as the first or second digit. In addition, the accessed CO Line must be after the PBX mode.
  - the FLASH button functions as Flash to PX (or PBX), if the accessed CO Line is analog. If the accessed CO Line is ISDN line, and is stored as the first digit, FLASH sends the remaining digits with envelope information in keypad facility IE, rather than in the Calling Party Number IE.
- The CPTU must be installed dial tone detection (refer to the SBX Installation Guide).
- System Speed Dial is restricted by station COS (see 1-23).
- There can be a maximum of 24 digits in a System Speed Dial number including other applicable digits and special function codes.
- If you dial an empty system speed bin, an error tone will sound.
- If you select a CO Line before dialing a System Speed Dial bin number, the selected CO overrides the CO Line programmed for the System Speed Dial bin number.
- If all CO Lines in the group are busy, a busy tone sounds when an attempt is made to access a System Speed Dial number.
- System Speed Dial numbers are saved even if the system is powered down (for example, during a power outage).

- Additional information:

SYSTEM SPEED DIAL	
SPEED DIAL RANGE	**DESCRIPTION**
2000-2199	Unrestricted
2200-2499	Restricted by Station COS

SYSTEM COS	
COS 1	Unrestricted
COS 2	Monitored by Exception Table A
COS 3	Monitored by Exception Table B
COS 4	Monitored by Exception Table A & B
COS 5	Long distance calls are not allowed; the dialed digits can be longer than 7 digits.
COS 6	Long distance calls are not allowed; only a max of 7 digits may be dialed.
COS 7	Only intercom, paging, and emergency calls are allowed; no dialing allowed on CO Lines.

ADMIN PROGRAMMING

Enable Speed Dial Access

Speed Dial Access -- if value is set to ON, the station user can use system speed dial to place a call.	PGM 112 + FLEX 9 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Set System Speed Zone

Enter the appropriate Speed Zone number (Range = 01-10) and select specific procedure:

Speed Bin Range in Zone -- a system speed zone can be grouped up to 10 system speed zones. The system speed bin section between 2000 and 2199 is defined as the toll free zone; the System speed dial numbers within this zone are not checked by the toll table.	PGM 232 + FLEX 1 + Value (sys speed zone) + [HOLD/SAVE]	VALUES -- Speed Bin Range for Zone = 2200-2499
Station Range to Access Zone -- the accessibility of system speed zones can be assigned to each station. NOTE: When there are too many Stations to see, you can scroll data using the volume up/down keys.	PGM 232 + FLEX 2 + Station Range (Range = 100-131) + [HOLD/SAVE]	If a range is not entered & saved, use the BACK softkey to access FLEX 3-4.

Toll Check -- if value is set to ON, the speed dial of this zone is checked by the toll table.	PGM 232 + FLEX 3 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 =Off 1 = On
Authorization Check -- if value is set to ON, the station user must enter the authorization code to use the speed dial of each system speed zone.	PGM 232 + FLEX 4 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 =Off 1 = On

Enable CO Dial Tone Detect

Use PGM 160, then FLEX 6 … see page 1-30.

OPERATION / SETUP

To store a number in a System Speed Dial from the System Attendant:

To store Station Speed Dial numbers from a digital phone:

1. Press [TRANS/PGM], then press [SPEED].
2. Enter the System Speed Dial bin to be dialed (see Additional Information in (see CONDITIONS).
3. Press the CO Line or Group button, if applicable.
4. Dial the appropriate telephone number, and include any of the following as needed:

- [CALLBK] = inserts a pause.
- button = if stored as the first digit, its function is Display Security. Otherwise, its function is to change to Pulse (for DTMF Switchover).
- [DND/FWD] = for Dial Tone Detect or Pause (see CONDITIONS).
- [FLASH] = inserts a Flash into the speed number (see CONDITIONS).

5. Press [HOLD/SAVE] to complete the entry.

   Hint: At this point, the "Character Entry Chart" on page D-50 can be used to enter a name (max. 12 characters) as needed.

6. Press [HOLD/SAVE] to store the setting (including the name if used), and complete the dialing sequence.

To store continuously, repeat this procedure from Step 3.

To make a call using System Speed Dial from a digital phone:

1. Go off-hook.
2. Press [SPEED], then enter the Station Speed Dial bin (2000-2499).

To make a call using System Speed Dial from an SLT phone:

1. Go off-hook.
2. Enter 558 (the Speed Dial access code).
3. Dial the System Speed Dial bin number.

Private Line (Digital Phones only)

CO Lines in the system can be assigned for exclusive use by one or more digital phone users.

CONDITIONS

- Private lines are assigned to CO Line Group 00.
- A Flexible CO button is required on the digital phone with the assigned private line.

  NOTE: Loop and Pool buttons cannot be used.
- Private lines function as any other CO Line, except that access is limited to designated stations only.
- The Pickup feature (see 1-188) is not available for stations with private lines.

ADMIN PROGRAMMING

Set CO Line Group

Use PGM 141, then FLEX 1 … see 1-148.

Paging

Internal, External, All-Call, and Meet-Me Page

Stations can be authorized (designated) for internal and external zone paging functionality. However, all stations can answer a Meet-Me Page announcement regardless of assigned permissions for internal and external paging.

CONDITIONS

- Stations can be assigned to specific zones for receipt of specific pages (for example, a zone may consist of members in Shipping Department so that all members of that zone receive pages specific to shipping issues/calls, etc.).
- A page warning tone, can be enabled to sound to page zone(s) prior to page being made.
- Individual pages are time limited. If the page time expires, the paging user is disconnected, and the page zone(s) returns to idle.
- Station in DND or that are busy cannot receive pages.

- When paging is used in the system, another page is not allowed at the same time.
- The handset should be used to make a page. On stations with a display, "LIFT HANDSET TO PAGE" appears if a page is attempted without lifting the handset.
- A Flex button can be programmed for Paging.
- If an intercom call is made to a station making a page, a busy tone sounds to the caller.
- If a CO line call is received at a station making a page, the paging station receives an off-hook ring.
- External paging:
  - There is only one external paging zone available.
  - External paging requires an externally-provided amplifier and paging system.
  - External paging units can be associated to relay contact.
  - When external paging is required, appropriate external equipment should be attached to the proper external page connections on the MBU.
- Internal paging:
  - There are ten internal paging zones available.
  - A station can be in any or all zones, or in no zone at all.
  - Stations not assigned to a page group can still make page announcements (if enabled in station programming).
  - While stations can be assigned to a page group in order to receive pages announcements, those stations may not make page announcements.
- Meet-Me paging
  - A user can respond to a Meet-Me page from any station in the system to be connected to the paging party for a private conversation.
  - The user has a limited time period within which to respond to the Meet-Me.
  - A station may respond to a meet me page regardless of assignment to a Pick-up Group or Paging Zone, and despite whether or not the station has authorization to make a page.
  - A Meet-Me page cannot be answered via a CO line. Only an intercom line can be used. If a user tries to answer a Meet-Me page request from CO line, an error tone sounds (and on phones with a display an error message appears).
- Access codes are as follows:

  501-510 = Internal Page Zones (506-510 = Conference page zones)
  543 = Internal All Call Page
  544 = Meet Me Page
  545 = External Page Zone
  549 = All Call Page (Internal & External)
- Also see "Pre-recorded (VMIB) Message on page 1-173.

ADMIN PROGRAMMING

Set Paging Timeout Timer

Paging Timeout Timer -- designates the maximum time for a page. The system will automatically disconnect the page when the timer expires.	PGM 181 + FLEX 10 + 015 seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-25

Enable Page Warning Tone

Page Warning Tone -- if value is set to ON, a page warning tone will be heard when paging starts.	PGM 161 + FLEX 4 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable Page Access

Page Access -- if value is set to ON, the station can page another Station.	PGM 111 + FLEX 8 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Internal Page Zones

Internal Page Zone -- each station can be assigned to internal page zone. SBX IP supports 10 internal paging zones. All stations are assigned to Internal Page Zone 1 by default.	PGM 118 + FLEX 1-5 (Zone 01-05, toggle) + [HOLD/SAVE]	VALUES -- Default = Zone 01

Set External Control Contact

Use PGM 168 … see page 1-92.

OPERATION / SETUP

To initialize a page:

1. Lift the handset.
2. Dial the appropriate paging code.
3. After the page warning tone sounds (if applicable), make the announcement.
4. Replace the handset.

To assign Meet-me Page at a Flex button:

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Enter 544, then press [HOLD/SAVE] to store the setting.

To respond a Meet-me Page:

1. Lift the handset.
2. Enter 544 (the Meet-me Page code).

NOTE: For a Nomad IP, enter 544, then press [Send].

3. Press [HOLD/SAVE] to connect to the paging party.

Pre-recorded (VMIB) Message

You can record a VMIB message for paging.

CONDITIONS

- The handset must be lifted to both record and send a VMIB message for paging.
- If a recorded message is stored, it will be sent over the paging system. However, if no message is stored, the user's "live" page can be made.

ADMIN PROGRAMMING

Set Paging Timeout Timer

Paging Timeout Timer -- designates the maximum time for a page. The system will automatically disconnect the page when the timer expires.	PGM 181 + FLEX 10 + 015 seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-255

OPERATION / SETUP

To record a VMIB paging message:

1. Press [TRANS/PGM], then enter 65.
   The announcement "Press # button to record" plays. Or, if there is already a stored message, the recorded message plays.
2. Press # button to start recording (a new message and/or overwrite existing message).
   The announcement "Record your message" and the confirmation tone sounds.
3. Record the message for use when paging.
4. Press [HOLD/SAVE] or [SPEAKER] to store the message.
   A confirmation tone sounds.

To delete a recorded paging message:

1. Press [TRANS/PGM], then enter 65.
   The existing recorded message plays.
2. Press [SPEED] while the recorded message is playing to deleted it.
   A confirmation tone sounds.
   -or-
1. Press [TRANS/PGM].
2. Enter 67 to delete the message.
   A confirmation tone sounds.

To send a VMIB message as a page:

Lift the handset, then enter the designated page code (5xx).

The recorded VMIB message is played through the paging system.

SOS Paging (Digital Phones only)

The system allows the recording of multiple VMIB messages for pre-recorded paging. In the case of an emergency, a recorded VMIB message can be sent to any or all paging zone.

CONDITIONS

- A Flex button must be assigned on a digital phone.
- This feature is only available using the (above mentioned) Flex button when the phone is in an idle state.
- The VMIB message for SOS Paging must be recorded only at an Attendant station.
- Paging zones include internal, external, and all-call paging area.
- VMIB SOS paging is not restricted by the VMIB Paging timer. VMIB SOS paging can continued whether or not the Paging Timeout timer expires.

OPERATION / SETUP

To assign VMIB SOS Paging at a Flex button:

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Enter the designated paging code (5xx), then the message number (001-070).
3. Press [HOLD/SAVE].

To use VMIB SOS paging:

Press the assigned VMIB SOS Paging Flex button.

Push-to-Talk (PTT) - (Nomad IP Phones only)

Using the PTT button of the Nomad IP, the user can talk to members of an internal page zone.

CONDITIONS

- PTT follows the feature operation of internal call page, except the Page Timer isn't applied.
- The range of internal page zone for PTT follows the internal page zone of each system except conference page zone.

OPERATION / SETUP

To register internal page zone for PTT:

1. Press [TRANS/PGM], then 1#.
2. Enter the internal page zone for PTT.

   If want to remove the assigned page zone, press 0 (zero).
3. Press [HOLD/SAVE].

To use PTT on the Nomad IP phone:

Press the PTT button of the Nomad IP, then talk to members of the designated internal page zone assigned.

Paging ends when the PTT button is released.

Rerouting

Call Forward

A station user can forward calls to any station, Station Group, or VMIB in the system. There are several types of Call Forwarding features:

- Unconditional - forwards calls to another destination no matter what the status of the called station is (for example, on or off hook, busy, DND, no answer, etc.).
- Busy - forwards calls when the called station is busy (off hook/DND)
- No Answer - forwards calls when there is no answer at the called station (within the preset time - see ADMIN PROGRAMMING).
- Busy/No Answer - forwards calls when the called station is busy (off hook/DND) or when there is no answer (within the preset time - see ADMIN PROGRAMMING).
- Follow-me - Forward - specify an extension to which you want all your calls automatically forwarded.

NOTE: All of the Forwarding features described above can be used to forward to phone numbers both inside and outside (off-network) the SBX IP 320 system. When a call comes into a forwarded station, the system automatically seizes an outgoing CO Line, then dials the telephone number entered by the user.

CONDITIONS

- The Call Forward feature must be enabled for each station (see ADMIN PROGRAMMING).
- A time limit can be set for No Answer Forward features: if the called station does not answer within the time set, the call will be forwarded (see ADMIN PROGRAMMING).

Call Forward, Station Off-net with Tel Num (Unconditional, No answer)

- While the number to which calls will be forwarded is automatically assigned to a station speed bin, it cannot be erased or edited using the normal speed bin programming. Instead, the speed bin to which the forwarding number is assigned is automatically deleted when the forward setting is deactivated/cancelled.

Call Forward, Incoming CO Off-net (ATD only)

- The system will automatically disconnect the call after the Unsupervised Conference Timer has expired.

FIELD	ACCESS CODE
CO Group Access	801-824
Individual CO Access	88XX
Retrieve Held CO Line	8*

- If there is no CO Line available, Off-net Call Forward is not activated.
- This feature is supported for DID lines.
- Any toll restrictions are based on the COS of the outgoing CO Line.

Call Forward, Follow Me

- While Follow-Me Call Forward can be activated from any Station within the system with Call Forward access, it MUST be programmed from the station to which calls are to be forwarded.
- A password must be entered at the station from which calls are to be forwarded.
- An Authorization code must be registered to use Follow-me Call Forward.

NOTE: Also see "SLT Phone Call Forward" on page 1-179 and "Preset Call Forward" on page 1-180.

ADMIN PROGRAMMING

Enable Allow Off-Network Call Forward

Off-net Call Forward -- if value is set to ENABLE, off-net call forward can be used	PGM 111 + FLEX 18 + 0 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Enable 1 = Disable

Access Authorization Code Table

Use PGM 227 … see page 1-20.

Enable Call Forward

Call Forward -- if value is set to ON, an incoming call can be forwarded to another destination.	PGM 111 + FLEX 2 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Call Forward No Answer Timer

Call Forward No Answer Timer -- if a value is set for no answer call forward, when the station does not answer, the call will be routed to the assigned forward destination following expiration of this timer.	PGM 181 + FLEX 1 + 015 seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-255

Set Off-net Call Mode

Off-net Call Mode -- if value is set to EXT, the station user can only forward CO calls to off-net (ex., mobile phone). Otherwise both CO and ICM calls can be forwarded to Off-net.	PGM 112 + FLEX 12 + 0 (ALL) + [HOLD/SAVE]	VALUES - 1 = EXT (only external Off-net Call Fwd is allowed 0 = ALL (internal & external Off-net Call Fwd is allowed)

Set Unsupervised Conference Timer

Use PGM 182, then FLEX 6 … see page 1-87.

OPERATION / SETUP

To assign a Call Forward to a Flex button:

1. Press [TRANS/PGM], then press the Flex button to be assigned.
2. Press [DND].
3. Press one of the following to assign the associated Call Forward type:
   1 = Call Forward, Unconditional
   2 = Call Forward, Busy
   3 = Call Forward, No Answer
   4 = Call Forward, Busy/No Answer
   5 = Unconditional Station Off-Network Call Forward (see CONDITIONS)
   6 = No Answer Station Off-Network Call Forward (see CONDITIONS)
   7 = Incoming CO Off-Network Call Forward (see CONDITIONS)
   8 = Unconditional Station Off-Network Call Forward with Tel Number
   9 = No Answer Station Off-Network Call Forward with Tel Number
   0 = Follow Me Call forward (see CONDITIONS)
4. Dial the number of the destination to which calls will be forwarded.
5. Press [HOLD/SAVE] to store the setting.

To activate Call Forward:

1. Go off-hook.
2. Press [DND/FWD].
3. Press the appropriate Forward flex button for the forward type to be activated, if available. Then, hang up.

   -or-

   Press one of the following to assign the associated the Call Forward type:
   1 = Call Forward, Unconditional
   2 = Call Forward, Busy
   3 = Call Forward, No Answer
   4 = Call Forward, Busy/No Answer
   5 = Unconditional Station Off-Network Call Forward (see CONDITIONS)
   6 = No Answer Station Off-Network Call Forward (see CONDITIONS)
   7 = Incoming CO Off-Network Call Forward (see CONDITIONS)
   8 = Unconditional Station Off-Network Call Forward with Tel Number
   9 = No Answer Station Off-Network Call Forward with Tel Number
   0 = Follow Me Call forward (see CONDITIONS)

4. Seize a CO Line (may be required for off-network forwards).
   -and/or-
   Enter the station, hunt group, or VMIB to which calls will be forwarded.
5. Go on-hook.

To deactivate Call Forward:

1. Go off-hook.
2. Press [DND/FWD], then # (the Call Forward cancel code).

SLT Phone Call Forward

Calls to an SLT phone can be forwarded to other stations, CO Lines, or the system VMIB.

CONDITIONS

- Call forward remains in effect until it is deactivated.
- A call cannot be forwarded to any station in DND mode. If an attempt is made to forward to such a station, an error tone will sound.
- A call forwarding station cannot leave a VMIB message.
- Calls to a dial pulse SLT phone cannot be forwarded to VMIB.

ADMIN PROGRAMMING

Enable Call Forward

Use PGM 111, then FLEX 2 … see page 1-177.

Enable VMIB Access

Use PGM 113, then FLEX 2 … see page C-11.

OPERATION / SETUP

To activate call forward from an SLT phone:

1. Lift the handset, then enter 554 (the Call Forward code).
2. Dial the call forward type. (For details, see "To active Call Forward" on page 1-178, and also review CONDITIONS above for restrictions).
3. Dial the number to which calls are to be forwarded.
   -or-
   Press # to forward calls to the system VMIB.
4. Go on-hook.

To deactivate call forward from an SLT phone:

1. Lift the handset.
2. Enter 554 (the Call Forward code), then the number to which calls were forwarded.

-or-

Dial 559.

A confirmation tone sounds.

3. Go on-hook.

Preset Call Forward

Call forward can be set for a station via ADMIN PROGRAMMING. These calls can be forwarded to another station or hunt group within the system. The forwarding effect is essentially the same as any other Call Forward No Answer setting: when a station receives an incoming CO call, and does not answer within the preset time.

CONDITIONS

- The Preset Call Forward loop feature is not supported.
- When a call comes into the forwarded station, ringing stops when the forward is initiated. However, the CO LED flashes continuously.
- The station to which calls are forwarded must have a CO line button or CO button.

ADMIN PROGRAMMING

Enable Preset Call Forward

Call Forward Preset -- if the station does not answer the incoming CO call within the Preset Call Forward timer, then the call is forwarded to a preset destination. No station is assigned by default.	Forward to Station: PGM 121 + 1 (Station) + Station Number + [HOLD/SAVE]	VALUES -- Default = None 1 = Station 2 = Hunt Group PGM 181 - FLEX 12
	Forward to Hunt Group: PGM 121 + 2 (Hunt Group) + Hunt Group Number + [HOLD/SAVE]	

Set Preset Call Forward Timer

Preset Call Forward Timer -- after timer expires, incoming calls will be forwarded to a predetermined station.	PGM 181 + FLEX 12 + 10 seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99

Call Transfer

Calls can be transferred to another station or CO Line.

Calls can be transferred by either the screened or unscreened method, or be directly transfer red to a voice mailbox:

- **Screened Transfers:** Allows the user to announce a call to the destination station before completing the transfer.
- **Unscreend Transfer:** Allows the user to complete a transfer without announcing the party to the destination station.
- Also see "Transferring Calls Using an SLT Phone" on page 1-183.

CONDITIONS

Transfer a Call to an External Number (CO Line - Digital Phones Only)

- During a blind transfer, if an external ISDN destination does not answer within the designated Transfer Hold Recall time:
  1. the transferring station receives a ring back, then -
  2. If the transferring station does not answer, the Attendant station receives a ring back for the amount of time set for Attendant Recall timer.
  3. If none of the stations answer within the allotted times, the call will be dropped.
- Detect Loop Lost or Disconnection must be available for detection by CO lines.
- If the transferred CO Line does not have answer information (analog CO), and the transferred call is not answered, the call does not ring back to the transferring phone; the call is disconnected after the Unsupervised Conference timer expires.
- If the transferred line is an ISDN CO call, the CO Line receives a ringback (reminder) if the Transfer Hold Recall time expires. The line is then released.
- During a screened transfer, pressing the original incoming CO Line button while making a transfer to an external number completely disconnects the call (incoming and outgoing).

Call Transfer a Call to Another Station

Transferred calls are shown via the Exclusive Hold (see "Hold" on page 1-184) flashing indication at the transferred-to destination digital phone.

If the receiving station does not answer the call in the Transfer Recall time:

1. the transferring station receives a ringback, then -
2. If the transferring station does not answer, the Attendant station receives a ring back for the amount of time set for Attendant Recall timer.
3. If none of the stations answer within the allotted times, the call will be dropped.

ADMIN PROGRAMMING

Set Transfer Recall Timer

Transfer Recall Timer -- designates the amount of time a transferred call will ring at a transferred-to Station, and how long it will recall at the transferring Station.	PGM 180 + FLEX 7 + 030 seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-300

Set Hold Recall Timer Use

Use PGM 180, then FLEX 5 … see page 1-10

Set Attendant Recall Timer

Use PGM 180, then FLEX 1 … see page 1-10

Set Open Loop Detect Timer

Open Loop Detect Timer -- designates the time limit for CO Open Loop.	PGM 142 + FLEX 13 + 0 (100 msec) + [HOLD/SAVE]	VALUES -- Range = 00-20

Set Unsupervised Conference Timer

Use PGM 182, then FLEX 6 … see page 1-51

OPERATION / SETUP

To transfer a call to another station or outside number:

1. While on a call, press [TRANS/PGM] to put the current call on hold.
2. If the call is being transferred to another station (internal), enter the station or hunt group to which the call is to be transferred.

   -or-

   If the call is being transferred to an outside number, seize a CO line, then enter the number to which the call is to be transferred.

For a Screened Transfer:

3. Wait for the destination phone to answer.
4. Make an announcement about the call, then hang up to complete the transfer.

   NOTE: If the destination phone is busy or doesn't answer, press [TRANS/PGM] to reconnect to the caller.

   -or-

For an Unscreened Transfer:

5. Wait for destination to ring, then hang up before it is answered to complete transfer.

To Transfer a Call Directly to Voicemail:

1. While on a call, press [TRANS/PGM] to put the current call on hold.
2. Press [CALLBACK], then enter the destination voicemail box number.
3. When the voicemail answers, hang up to complete the transfer.

Transferring Calls Using an SLT Phone

CONDITIONS

- SLT phones can only transfer calls to other stations within the same system. Transfer to external numbers is not supported.
- When the transferring station has DSS with a button that corresponds to the destination station (to which the call is being transferred), LED of corresponding DSS button flashes.
- If the station to which a call is being transferred is busy, a hook-flash can be performed to reconnect to the calling party.

ADMIN PROGRAMMING

Set Transfer Recall Timer

Use PGM 180, then FLEX 7 … see page 1-182.

Set Hold Recall Timer

Use PGM 180, then FLEX 5 … see page 1-10.

Set Attendant Recall Timer

Use PGM 180, then FLEX 1 … see page 1-10.

Enable No Touch Answer

No Touch Answer -- if value is set to ON, the station can respond to a transferred CO call automatically when station mode is Hands-free or Privacy mode.	PGM 111 + FLEX 7 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To transfer a call using an SLT phone:

1. Lift the handset.
2. Perform a hook-switch.
   The intercom dial tone sounds, the CO Line is placed on exclusive hold (see "Hold" on page 1-184), and the Transfer Recall timer is activated.
3. Enter the station to which the call is to be transferred.

To Make a Screened Transfer:

1. Wait for the destination phone to answer.
2. Make an announcement about the call, then hang up to complete the transfer.

   NOTE: If the destination phone is busy or doesn't answer, perform a hook-switch to reconnect to the caller.

   -or-

To Make an Unscreened Transfer:

Wait for the destination to ring, then hang up before it is answered to complete the transfer.

NOTE: A hook-switch can be performed at any time to reconnect to the caller.

Holding and Parking

Hold

Calls can be placed on hold at any station. The result of the Hold condition can be set up in ADMIN PROGRAMMING.

There are three types of Hold that can be used.

- **System Hold** - allows any station to retrieve a held call.
- **Exclusive Hold** - allows only the station at which the call was placed on hold to retrieve it.
- **Automatic Hold** - allows a user with a DSS button assigned to another station to be on a CO call, then easily make an intercom call by pressing that DSS button. In this case, the CO Call is automatically placed on hold while the user is on the call with the other station.

CONDITIONS

- When a CO Line placed on Exclusive Hold the CO line LED flashes at the station that placed it on hold, and the corresponding CO line LED on the other stations is lit (steady).
- The LED that corresponds to a CO Line placed on System Hold flashes at all stations.
- When Exclusive Hold is set at a station, the Exclusive Hold Recall Timer is initiated. When the Exclusive Hold Recall Timer expires, the "holding" station receives a ringback that lasts for the duration of the I-Hold Recall Timer - see ADMIN PROGRAMMING.
- When System Hold is set at a station, the System Hold Recall Timer is initiated. When the System Hold Recall Timer expires, the original "holding" station receives a ringback that lasts for the duration of the I-Hold Recall Timer - see ADMIN PROGRAMMING.
- When the I-Hold Recall Timer expires, the Attendant receives a ringback that lasts for the duration of the Attendant Recall Timer - see ADMIN PROGRAMMING. If the call remains unanswered when the Attendant Recall time expires, it is disconnected.

- Hold Preference - If System Hold is set as the preferred Hold, [HOLD] is pressed once for System Hold, and twice for Exclusive Hold. The reverse is also true, if Exclusive Hold is set as the preferred Hold, [HOLD] is pressed once for Exclusive Hold, and twice for System Hold.

ADMIN PROGRAMMING

Set Hold Preference - allows user to toggle between Hold types (System or Exclusive)

Hold Preference -- there are two types of Hold: System Hold and Exclusive Hold. If a call is held in System Hold, any station can retrieve the call; in Exclusive Hold, only the holding station can retrieve the call.	PGM 160 + FLEX 8 + 1 (System) + [HOLD/SAVE]	VALUES -- 0 = Exclusive 1 = System

Set Attendant Recall Timer

Use PGM 180, then FLEX 1 … see page 1-87

Set Exclusive Hold Recall Timer

Exclusive Hold Recall Timer -- designates the amount of time before a call placed on System Hold will recall at the station that placed the call on hold.	PGM 180 + FLEX 4 + 060 seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-300

Set Hold Recall Timer

Use PGM 180, then FLEX 5 … see page 1-10

Set System Hold Recall Timer

Sys Hold Recall Timer -- designates the amount of time before a call placed on System Hold will recall the station placing the hold.	PGM 180 + FLEX 6 + 030 seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-300

Set Transfer Recall Timer

Use PGM 180, then FLEX 7 … see page 1-182.

Enable Automatic Hold

Automatic Hold -- while seizing a CO line, the station user secures another CO line by pressing the {CO} button. If this value is set to ON, the previously seized CO line will automatically be placed on Hold. For Attendant, default value is ON.	PGM 112 + FLEX 2 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

IMPORTANT: The method use for placing a call on either Hold type is based on the setting in Hold Preference - see CONDITIONS and ADMIN PROGRAMMING.

To place a CO Line on Hold from a digital phone:

Press [HOLD/SAVE] once or twice for System/Exclusive Hold (depending upon the setting in Hold Preference).

To place a CO Line on Hold from an SLT phone:

Perform a hook-flash, then enter 560 to put a call on System or Exclusive hold (depending upon the setting in Hold Preference).

To retrieve a held call from the digital phone that placed the hold:

1. Lift the handset.
2. Press the CO button.

-or-

Press 8 # and the CO Line number.

To retrieve a held call from the SLT phone that placed the hold:

Lift the handset, then press 8*.

To use Automatic Hold while on a CO Line call:

1. Press a CO button.
2. When the new CO Line is connected, the previous CO Call is placed the Admin Programmed preferred Hold state.

Park

A User can park an ICM or CO call in a "virtual" location. In this way, the appropriate user can (be paged and) pick up (unpark) the call by dialing the designated location number.

CONDITIONS

- To receive a parked call, the station MUST have CO button.
- If a CO call remains unanswered for the duration of the Call Park Recall time:
  1. the station that parked the call receives a ringback, then -
  2. If the call remains unanswered, the Attendant station receives a ring back for the amount of time set for Attendant Recall timer.
  3. If none of the stations answer within the allotted times, the call will be dropped.Attendant stations do not receive ringback for unanswered intercom calls.

ADMIN PROGRAMMING

Call Park Recall Timer

Call Park Recall Timer -- designates the amount of time before a call placed in a call park location will recall at the station that placed the call on park.	PGM 180 + FLEX 2 + 120 seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-600

OPERATION / SETUP

To park a call:

1. Press [TRANS/PGM].
2. Enter the parking location 601-608, then go on -hook.
3. Page the user (if appropriate) with the location of the parked call for retrieval.

To retrieve the parked call from a digital phone:

1. Go off-hook.
2. Enter the location of the parked call.

Park and Page

This feature allows a caller to page a user when the caller reaches the user's voice mail. This process places the call in a System Park Zone, then have the user paged.

CONDITIONS

- The target mailbox must have the COS associated with this feature enabled.
- This feature is only supported for CO callers.
- The call is sent to the operator:
  - If the call remains unanswered in the park location for the duration of the Call Park Recall timer, the call transfers to the operator.
  - After one attempt
- This setting must be made for each station through ADMIN PROGRAMMING. The default setting is for this feature to be disabled for each station.
- PGM 6* must be used to record the user's name at each station with this feature enabled.
- PGM 6, then 1 must be used to record the user's greeting (including paging instructions - shown below) at each station with this feature enabled.

  The system places the caller into a parking zone (beginning at the first available zone), then accesses the All-Call page. A pre-recorded broadcast sounds through the paging system: "*Call for [user] in location XXX*".The system then goes on-hook.

ADMIN PROGRAMMING

Enable Park and Page

Park and Page -- this feature allows a caller reaching a mailbox to select an option to be placed into a system park zone and have the mailbox user paged.The mailbox must have a COS with this feature enabled.	PGM 113 + FLEX 17 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

When the caller hears the mailbox greeting with page instructions, the caller must press 8 to page the user (see CONDITIONS).

Pick-Up

A station user can pick up a call that is ringing at another station.

There are two types of Call Pick Up features:

- Directed Call Pick-up - allows a user to pick up a call ringing at another station within the associated Intercom Tenancy Group by dialing the pick up code.
- Group Call Pick-up - allows a user to pick up a call ringing at another station in the same pick-up Group.

Directed Call Pick Up

CONDITIONS

- A CO line, {POOL} or CO button is required to pick up a CO Line call.
- When several calls are queued at a station or hunt group, the pick-up depends on the Pick-up Priority set in ADMIN PROGRAMMING.
- Queued callback and private line calls cannot be picked up.
- An intercom call cannot be picked up at a station in Hold or Park mode.
- When the same types of CO lines are queued, the CO line that has been queued the longest is picked up first.
- This feature is only allowed within the Intercom Tenancy Group to which both the ringing and answering station belong. A station cannot pick up any call ringing at a station that belongs to "denied" Intercom Tenancy Group set in ADMIN PROGRAMMING.
- This feature can be used to answer intercom calls to a Doorbox (see 1-93).

ADMIN PROGRAMMING

Enable Direct Call Pick up Code

Use PGM 107, then FLEX 6. Refer to the *SBX IP Installation Guide*.

PLA Priority Setting - Pick-up Priority

Use PGM 173 … see page 1-131.

Set Intercom Tenancy Group

Use PGM 120 … see 1-64.

OPERATION / SETUP

To assign Direct Call Pick-up Flex button:

1. Press [TRANS/PGM], then the Flex button to be assigned.
2. Press 7, the press [HOLD/SAVE] to store the setting.

To pick up a call ringing at another station:

1. Go off-hook, then press 7 (the Direct Call Pick-Up code).
   -or-
   Press the programmed {Direct Call Pick-up} Flex button (if available).
2. Dial the station number of the ringing station.

Group Call Pick Up

CONDITIONS

- Intercom calls, incoming CO Lines, recalling CO Lines and transferred CO Lines can be all supported for Group Pick Up. An intercom call cannot be picked up at a station in Hold or Park mode.
- A CO line, CO or {POOL} button is required to pick-up a CO Line call.
- Queued callback and private line calls cannot be picked up.
- This feature can be used to answer intercom calls to a Doorbox (see 1-93).
- When several calls are queued at a station or Hunt Group, the pick-up order depends on Pick-up Priority set in ADMIN PROGRAMMING.
- When the same types of CO lines are queued, the CO line that has been queued the longest is picked up first.
- This feature is only allowed within the Intercom Tenancy Group to which both the ringing and answering station belong. A station cannot pick up any call ringing at a station that belongs to "denied" Intercom Tenancy Group set in ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Pick-up Attribute

Use PGM 190, then FLEX 2 … see page 1-98.

Pick-up Group Attributes

Use PGM 191 … see page 1-115.

PLA Priority Setting - Pick-up Priority

Use PGM 173 … see page 1-131.

OPERATION / SETUP

To answer a call ringing at a station in the same Pick-up group:

1. Go off-hook.
2. Dial the Group Pick-up code 566.

To assign a {GROUP CALL PICK-UP} button at a flex button:

1. Press [TRANS/PGM].
2. Press the Flex button to be assigned.
3. Enter 566.
4. Press [HOLD/SAVE].

Software Upgrade

The SBX IP MBU software can be upgraded via PC using the SBX IP upgrade program. Using the SBX IP upgrade program requires that the PC and SBX IP system be connected through a Serial, LAN, or MODEM interface. Once connected, the software upgrade file is sent from the computer to the system and the MBU software is automatically upgraded.

IMPORTANT: Refer to the SBX IP Installation Guide for more information about connecting the SBX IP to a computer.

LAN Connection

The MBU software can be upgraded through a LAN interface using the ipLDK upgrade program stored within a remote computer.

CONDITIONS

- If the connection is lost during the upgrading process, the number can be redialed. If the line was safely disconnected, it will be connected immediately.
- While in the upgrading process, none of the features within the system are available.
- If the MBU software upgrade is interrupted (stops) without being completed, retry the upgrade from the beginning.
- Valid ROM files must be used or the MBU software upgrade cannot be performed: the process will not even initiate.

ADMIN PROGRAMMING.

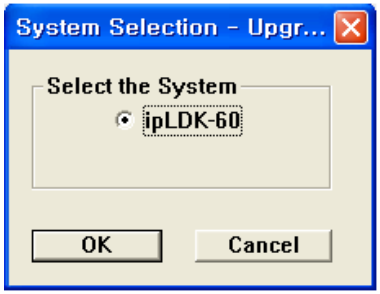
Make IP Setting for MBU

Use PGM 108 … refer to "Chapter 6" in the SBX IP Installation Guide for additional details about Admin Programming.

OPERATION / SETUP

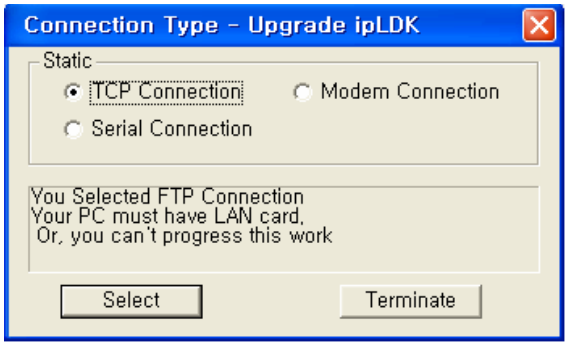
To upgrade the software via LAN:

1. Connect the LAN cable to the PC LAN-card.
2. Run the ipLDK PC Upgrade program.
3. Select the ipLDK system to be upgraded.
4. Click the [OK] button.



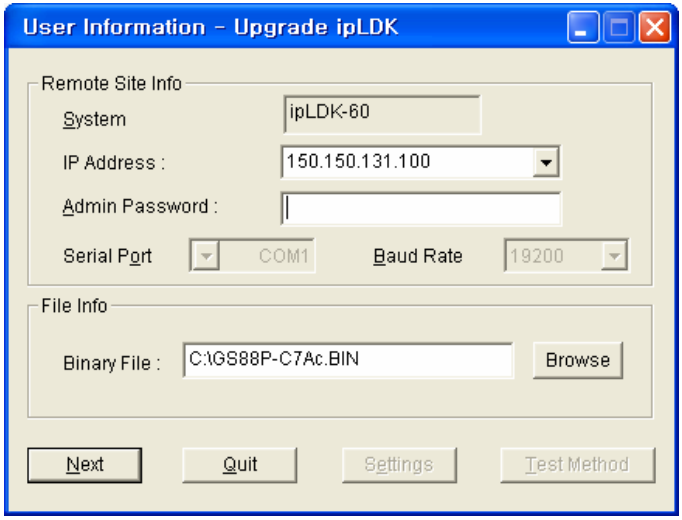
5. Select "TCP Connection" as the port type.
6. Click the [Select] button.

   The *User Information* screen will display



7. From the User screen, enter the SBX IP IP Address, Admin Password, and the path of the Binary File.
8. Click the [Next] button.
9. Click Start to start the MBU software upgrade.

When the ROM file is finished downloading, the SBX IP System erases the previous ROM data, then places the new ROM file in the SBX IP ROM area.



Modem Connection

The MBU software can be upgraded via Modem interface using the ipLDK upgrade program stored within a remote computer.

CONDITIONS

- If the connection is lost during the upgrading process, the number can be redialed. If the line was safely disconnected, it will be connected immediately.
- While in the upgrading process, none of the features within the system are available.
- If the MBU software upgrade is interrupted (stops) without being completed, retry the upgrade from the beginning.
- Valid ROM files must be used or the MBU software upgrade cannot be performed: the process will not even initiate.

ADMIN PROGRAMMING

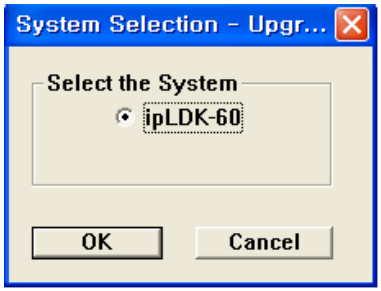
Set Modem Assignment - ASC Device

STA No. -- sets the Modem-associated station to be used. Incoming CO calls will be connected to the Modem device if the Station receives a call.	PGM 170 + FLEX 1 + Station Number + [HOLD/SAVE]	VALUES -- Default = last station (131)
CO No. -- if a CO Line is associated with the Modem, all incoming CO calls through the line will be connected via the Modem. The Modem associated to the CO Line cannot be used for outgoing CO calls.	PGM 170 + FLEX 2 + CO Number + [HOLD/SAVE]	VALUES -- 01-12 (Analog CO line)

OPERATION / SETUP

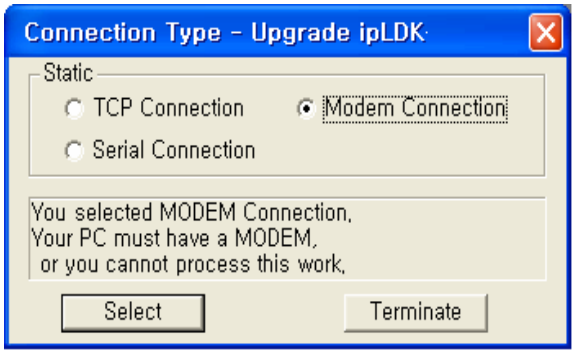
To upgrade the Modem software:

1. Access the ipLDK PC Upgrade program.
2. Select the ipLDK system to be upgraded.
3. Click the [OK] button.



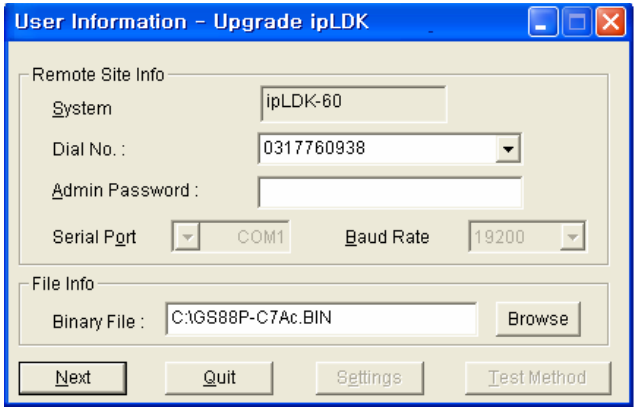
4. Choose "Modem Connection" as the port type.
5. Click the [Select] button.

   The *User Information* screen will display



6. From the User screen, enter the SBX IP Dial No., Admin Password, and the path of the Binary File.
7. Click the [Next] button.
8. When the *Modem Configuration* dialog box displays, select the appropriate modem type.
9. Click Start to start the MBU software upgrade.

   When the ROM file is finished downloading, the SBX IP System erases the previous ROM data, then places the new ROM file in the SBX IP ROM area.



Serial (COM port)

The MBU software can be upgraded via through an RS-232C serial interface using the ipLDK upgrade program stored within a remote computer.

CONDITIONS

- The Serial port MUST be connected to COM port 2 in the MBU.
- While in the upgrade process, other features do not work in the system.
- When the SBX IP MBU software upgrade is finished without completing, you can retry to upgrade by doing the whole process again.
- If the ROM files you want to send are invalid, the MBU s/w upgrade will not be started.

ADMIN PROGRAMMING

Set RS-232C Port

RS-232C Port Setting -- used to designate port settings and assign: Baud Rate, CTS/RTS, P-Break, and LPP.	COM1 PGM 174 + FLEX 1 + FLEX 1 + 6 (19200, Baud rate) + [HOLD/SAVE] COM2 (MODU Port) PGM 174 + FLEX 2 + FLEX 1 + 6 (19200, Baud rate) + [HOLD/SAVE]	VALUES -- COM1-COM2 (Flex 1-4) FLEX 1-FLEX 4 (refer to Table)

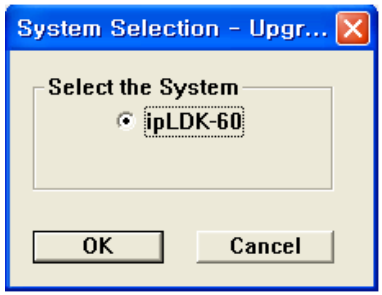
FLEX	SETTING	VALUE	DEFAULT
1	BAUD RATE	0: n/a 1: n/a 2: 1200 Baud 3: 2400 Baud 4: 4800 Baud 5: 9600 Baud 6: 19200 Baud 7: 38400 Baud	19200
2	CTS/RTS	On/Off	Off
3	P-BREAK	On/Off	Off
4	LPP	001-199	060

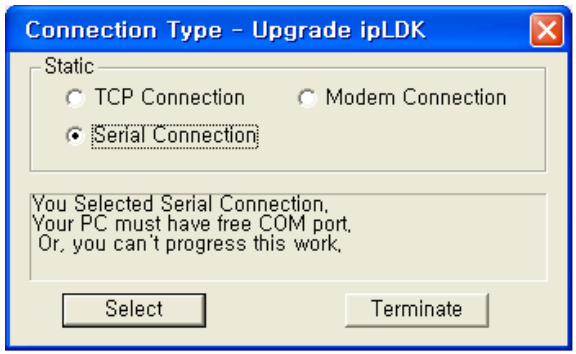
OPERATION / SETUP

To upgrade the SERIAL (COM port):

1. Connect the RS-232C cable between the SBX IP system and the PC.
2. Run the ipLDK PC Upgrade program.
3. Select the ipLDK system to be upgraded.
4. Click the [OK] button.
5. Select "Serial Connection" as the port type.
6. Click the [Select] button.

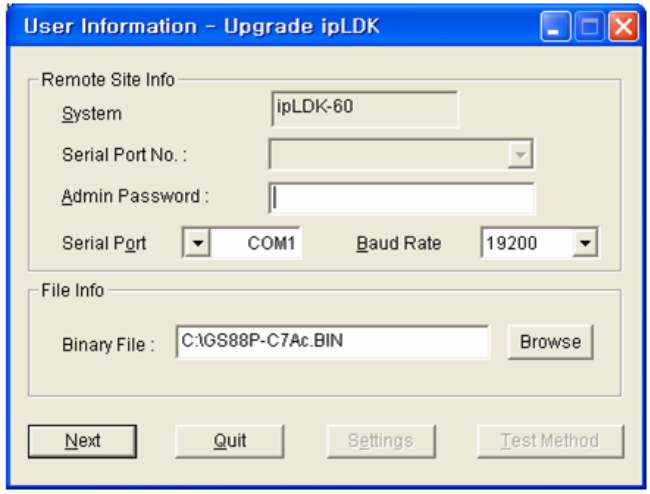
   The *User Information* screen will display





7. From the User screen, enter the Serial Port Number, Admin Password, and select the serial port Baud Rate.
8. Click the [Next] button.
9. Click Start to start the MBU software upgrade.

When the ROM file is finished downloading, the SBX IP System erases the previous ROM data, then places the new ROM file in the SBX IP ROM area.



Station Message Detail Recording (SMDR)

The SBX IP System SMDR (station message detail recording) provides detailed information about both incoming calls and outgoing calls. In this feature, it is programmable to record all calls or just outgoing long distance calls. SMDR information includes outgoing CO Line, dialed number, time, date, station that answer the call, and duration of call. Authorization codes may also be entered and recorded.

CONDITIONS

- There is an assignable SMDR record option set in ADMIN PROGRAMMING.
- If SMDR - LONG DISTANCE ONLY is selected, only outgoing toll calls are printed.
- If SMDR - ALL CALL is selected, incoming and outgoing local and long distance calls are printed.
- Calls will be logged as long distance if a user dials any number:
  - with the first and second digits matching a programmed with a long distance code the call will be logged as a long distance call.
  - containing more than the maximum local call digit count value. The maximum local call digit count default is 7 digits, but it can be changed in ADMIN PROGRAMMING.
- The SMDR output contains the following fields
  - 5-digit station call originator (terminating for incoming)
  - 3-digit used CO line
  - 8-digit call duration (HH:MM:SS)
  - 8-digit year, month, and day (YY/MM/DD)
  - 5-digit time of day call originator
  - 1-digit call identification digit-first digit in digit dial
  - 18-digit collected dial digit
  - 2-digit account group number
  - 5-digit pulse metering count
  - 10-digit call cost
  - 12-digit account code
- When the SMDR storage pools are nearly full, the system displays a "Buffer full" warning at the Attendant station. The display indicates the number of SMDR records remaining.
- SMDR account groups can be used to group stations for specific billing purposes.
- The "SLT DTMF RLS TMR" setting must be adjusted to a reasonable value to make sure that all digits dialed by SLT stations are printed.
- ICM SMDR is not supported for Lost Calls.

- Only Calling Party numbers [NO] are displayed in the [STA] field.
- Only the number of the station number that receives an intercom call is displayed in the DIALED field.
- The ICM SMDR record format is same as the existing SMDR record format.
- The ICM HUNT Call SMDR record is same as ICM Call.
- The following features can be included in the SMDR:
  - Paging calls: the paging station number appears in the STA field, and station number that is paged appears in the [DIALED] field.
  - ICM Conference Room calls: the station numbers that enter the Conference Room appear in STA field, while the Conference room number appears in the [DIALED] field (for example [Conf Rm 1]).
  - Conference feature: the station that initiates the conference appears in the STA field, while the Conference members appear in the [DIALED] field.
  - ICM activity: the ICM SMDR SAVE option must be enabled, and for printout purposes, the ICM SMDR PRINT option must be enabled in ADMIN PROGRAMMING.
- An SMDR can be printed from a station in Hands free or Private mode.
- The ICM call Parking feature is printed as two records; the station that receives and parks the call, then the station that retrieves the call. Park Ringback is printed as another record. The SMDR will only include the timing of both of these activities, but will not include the calculated SMDR time.

ADMIN PROGRAMMING

Set SMDR Attributes

SMDR Save Enable -- if value is set to ON, a maximum of 1000 SMDR data entries can be recorded in the system memory.	PGM 177 + FLEX 1 + 0 (Off) + [HOLD/SAVE	VALUES -- 0 = Off 1 = On
SMDR Print Enable -- if value is set to ON, SDMR data can be printed in real time through the serial/MODEM/LAN port.	PGM 177 + FLEX 2 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable SMDR Record

Long Distance/All Call Recorded (SMDR Recording Call Type) -- if value is set to LD, only long distance outgoing CO calls will be recorded in the SMDR. If value is set to ALL, all outgoing CO calls will be recorded by the SMDR. A long distance call is defined as a call that satisfies the condition of FLEX 4, or FLEX 14.	PGM 177 + FLEX 3 + 1 (LD) + [HOLD/SAVE]	VALUES -- 0 = All Call 1 = LD

Enable ICM SMDR SAVE

ICM SMDR Save -- if value is set to ON, ICM call data is stored in Off-line SMDR.	PGM 177 + FLEX 17 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable ICM SMDR PRINT

ICM SMDR Print -- if value is set to ON, ICM call data is printed in On-line SMDR.	PGM 177 + FLEX 18 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set SLT DTMF RLS Timer

SLT DTMF Release Time -- when SLT makes an outgoing call, the DTMF receiver will be released after the timer expires.	PGM 181 + FLEX 13 + Value (00 secs, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-60 (seconds)

Access SMDR Local Code Table

Local Code Table -- a local call is defined as the telephone number satisfies the condition of PGM 204. If telephone numbers match this table, the SMDR is printed as a local call. A maximum of 16 SMDR local codes are available. The SMDR long distance code can be up to a 5-digit number.	PGM 204 + bin number (01-16) + local code (max. 5 digits)	VALUES -- Default: SMDR long distance code = none

OPERATION / SETUP

To print the SMDR:

1. Activate the PC utility program on a networked PC.
2. Connect the serial port of MBU to the serial port of the PC with the RS-232C cable.

At the Attendant Station:

3. Press [TRANS/PGM], then enter 0111 (for Station Base) or 0113 (for Group Base).
4. Enter the station or group range.

The SMDR prints via the connected computer.

To delete an SMDR:

Press [TRANS/PGM], then enter 0112 (for Station Base) or 0114 (for Group Base).

To abort SMDR printing:

Press [TRANS/PGM], then enter 0116.

Print-out - Lost Call

A Lost Call in the SBX IP 320 is defined as one that the caller terminates (hangs up) before the call is answered.

CONDITIONS

- This print out is only possible if:
  - the system is connected to a computer via an RS-232C serial connection.
  - each lost call is automatically sent to a computer (via the serial connection) as each lost call occurs.
  - SMDR record/SMDR field is enabled in ADMIN PROGRAMMING.
- Lost Call details are not saved.
- To activate the SMDR record, the SMDR field must be set in ADMIN PROGRAMMING.

- The format of an individual lost call record is shown below, and includes results for various types of lost calls:
  - H = represents an answered incoming call transferred to another station, that was disconnected by the caller before the transferred-to station answered. It can also represent a held call that was disconnected by the caller.
  - R = represents a Direct call (DID) to a station, that was disconnected by the caller before the station answered. It can also represent a DID call to station (A), that was automatically forwarded to another station (B), because the DID station (A) did not answer, but was disconnected by the caller before station (B) answered.

NO STA CO TIME START DIALED

----- ---- --- ------ ----------------- ----------------------

0001EXT031 00:00:10 24/07/08 11:55 R RING 00:05

Normal incoming call is received at an assigned stations of CO 031 during 5 sec.

0002 10100300:01:20 25/07/08 16:23 R RNG 00:09

DID call is disconnected during it being forwarded to ATD STA 101, because the dialed station does not exist.

0003100001 00:00:20 25/07/08 18:11 R100 RING 00:04

DID call is received at STA 100 during 4sec and disconnected.

0004 102002 00:01:20 26/07/08 18:37 R103 RING 00:04

DID call is received at STA 102 via unconditional call forward to STA 103 during 4 sec and disconnected.

0005 621008 00:00:20 26/07/08 13:02 G620 RING 00:06

DID call is received at Ring Group 621 during 6sec and disconnected.

0006 10000100:00:04 06/07/08 16:04 H100 RING 00:02

DID call is disconnected while STA 100 is being held it.

0007 10200100:00:07 06/07/08 17:04 H100 RING 00:02

DID call is disconnected while it is being transferred from STA 100 to STA 102.

ADMIN PROGRAMMING

Enable SMDR Print

SMDR Print Enable -- If this value is set to ON, SDMR data can be printed in real time through the serial/MODEM/LAN port.	PGM 177 + FLEX 2 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Enable Long Distance/ All Call Recorded

Long Distance/All Call Recorded (SMDR Record Call Type) -- if value is set to LD, only long distance outgoing CO calls will be recorded in the SMDR. If this value is set to ALL, all outgoing CO calls will be recorded by the SMDR. A long distance call is defined as a call that satisfies the condition of FLEX 4, or FLEX 14.	PGM 177 + FLEX 3 + Value (1 LD) + [HOLD/SAVE	VALUES - 0 = All Call 1 = LD

Enable Print Lost Call

Print Lost Call -- if value is set to ON, lost calls are printed. Lost calls are defined as calls that are unanswered.	PGM 177 + FLEX 6 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To print the lost call count of record from the Attendant station:

Press [TRANS/PGM], then enter 0117.

The printout of the record is sent to the computer connected to the SBX IP 320.

To clear the lost call count of records from the Attendant station:

Press [TRANS/PGM], then enter 0118.

The lost call count time is restarted.

Supplementary Service

Message Wait Notification to Mobile Extension (SIP Trunks only)

When a voice mail message is left at a station, the system can be set up to send notification to a mobile phone.

CONDITIONS

- This setting is dependent upon the SMS setting in ADMIN PROGRAMMING. (*SMS is not supported at this time*.)

ADMIN PROGRAMMING

Enable Mobile Extension Use

Use PGM 236 … see 1-238.

OPERATION / SETUP

To activate/deactivate message wait notification to a mobile phone:

1. Press [PGM], then enter 37.
2. Press 1 to enable, or 0 to disable.
3. Press [HOLD] to store the setting.

Traffic Analysis

The system can monitor and print various system activities at the request of the main Attendant. The information can be used to:

- Monitor and evaluate system performance
- Observe current usage and take any necessary corrective actions
- Anticipate possible CO line issues
- Determine the need for system updates and upgrades

CONDITIONS

- The traffic data is sent to a computer via an RS-232C serial port or a LAN (refer to the SBX IP 320 Installation Guide).
- The system supports the following traffic reports.
  - Attendant Traffic Report - see 1-205
  - Call Summary and Hourly Reports - see 1-206
  - CO line Traffic Summary and Hourly Reports - see 1-208
  - H/W Unit Usage Summary Report - see 1-209

- This feature can only be accessed from the Main Attendant Station (refer to the *Attendant Programming Menu Table* in the "Attendant Programming Codes" on page D-44).
- Available time measurement types are:
  - Today's peak time
  - Yesterday's peak time
  - Last hour
  - Yesterday's total
  - Today's total

ADMIN PROGRAMMING

Select Print Port

Traffic -- Traffic analysis data can be printed through this port.	PGM 175 + FLEX 3 + Value (01) + [HOLD/SAVE]	VALUES -- Range: 01-11 Default: COM1 (01) 01: COM1 02: COM2-MODU 03: TELNET 1 04: TELNET 2 05: TELNET 3 06-11: **(n/a)**

OPERATION / SETUP

To print traffic reports from the Main Attendant Station (only):

1. Press [TRANS/PGM], then enter the following:
   0121 = All Summary
   0122 = All Summary - periodical
   0124 through 0129 = individual reports

   NOTE: Some individual reports may require the entry of a CO group number.
2. Select Measurement Time type.
3. Press [HOLD/SAVE] to generate the report.

To cancel printing of All Summary periodic report from the Main Attendant Station (only):

1. Press [TRANS/PGM].
2. Enter 0123.
3. Press [HOLD/SAVE] to cancel the report.

Attendant Reports

The SBX IP system provides a detailed report of Attendant Resources.

CONDITIONS

- This report includes the following fields/information.
  - *Analysis Start Hour* - the time at which recording of data began
  - *Attendant Number* - the station number of an Attendant.
  - *Total Calls* - the number of total incoming calls received at an Attendant station (not including CO ring group calls and Hold ringback).
  - *Calls Answered* - the number of calls answered by all active Attendants during the specified time period.
  - *Calls Abandoned* - the number of calls that rang at an Attendant station, but were dropped before being answered at that station.
  - *Calls Held-Abandoned* - the number of calls dropped while on Hold (including any Held calls that timed out, then rang back to the station).
  - *Calls Held* - the number of calls answered and placed on Hold at an Attendant station.
  - *Time Available* - the time duration (in minutes) for which an Attendant station was available, but yet did not answer calls.
  - *Time Talk* - the total time an Attendant station was active on a CO line. This time count does not start until a call is answered. The duration of time between the termination of a call and the answering of a new call is not counted as Time Available or Time Talk - see Speed of Answer below).
  - *Time Held* - the total amount of time calls were placed on hold at an Attendant station.
  - *Time No Answer* - the average amount of time that calls remained in the queue and/or rang at an Attendant station before the caller hung up.
  - *Speed of Answer* - the average elapsed time between one call being terminated and a new call answered at an Attendant station.
  - *Type* - type of Attendant (that is, System, Main, Intercom Tenancy Group).
- This report includes statistical information for the following time periods:
  - Last Hour
  - Today’s peak time
  - Yesterday's peak time
  - Yesterday's total
  - Today's total

- The following is an example of an Attendant Traffic Report - Yesterday's Total

```
============================================================

Site Name  :
Report Type : Attendant Traffic Report - Yesterday Total
Date       : 02/12/08 13:14
============================================================

 Atd Meas      --------- Calls ---------   ------- Time ------    Time Speed  Atd
 No  Hour Total Ans Abnd H-Abd Held Avail  Talk  Held  NoAns Ans   Type

 2629 --:--   9   3   6 0 0 02:02  00:00 00:00 00:00 00:00   Sys

 4807 --:--   8   6   2 0 0 04:21  00:13 00:00 00:09 00:04   Main
 3619 --:--   4   4   0 0 0 01:04  00:21 00:00 --:-- 00:01   Main
 2618 --:--   0   0   0 0 0 00:05  00:00 00:00 --:-- --:--   Main
 3629 --:--   6   1   5 0 0 02:58  00:23 00:00 00:14 00:03   Main
```

OPERATION / SETUP

To print the Attendant Traffic Report at the main Attendant station:

1. Press [TRANS/PGM].
2. Dial 0124.
3. Select Measurement Time type.
4. Press [HOLD/SAVE] to generate the report.

Call Reports

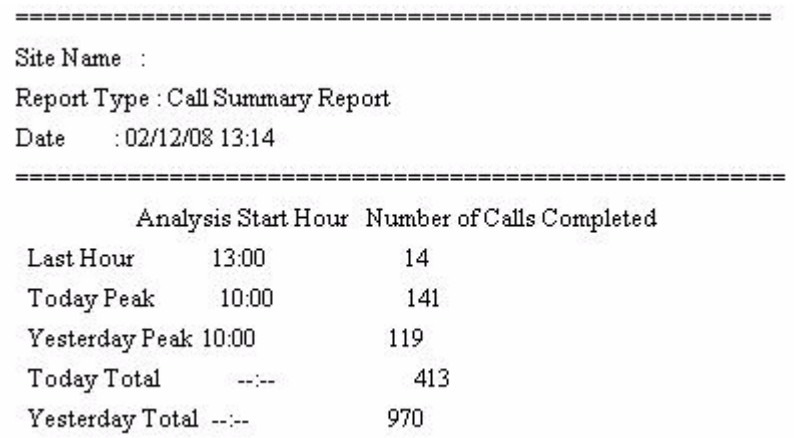
There are two Call Reports available for analysis of system call status.

- *Call Summary Report* - Monitors all daily call traffic
- *Call Hourly Report* - Provides a list of calls for the past 24 hour period for analysis of possible call overload

CONDITIONS

- The Call Summary report includes call status information for the following time periods:

  - Last hour
  - Today's peak time
  - Yesterday's peak time
  - Yesterday's total
  - Today's total
- The Call Hourly report includes the following fields/information:
  - *Analysis Start Hour* - the time at which recording of data began
  - *Number of Calls Completed* - the total number of calls completed or answered during the designated hour
- The following is an example of a Call Summary Report



```
==========================================================
Site Name  :
Report Type : Call Summary Report
Date       : 02/12/08 13:14
==========================================================
                Analysis Start Hour  Number of Calls Completed
Last Hour           13:00                 14
Today Peak          10:00                 141
Yesterday Peak      10:00                 119
Today Total         --:--                 413
Yesterday Total     --:--                 970
```

OPERATION / SETUP

To print the Call Summary Report from the Main Attendant station:

1. Press [TRANS/PGM], then enter one of the following:
   0125 = Call Summary Report
   0126 = Call Hourly Report
2. Press [HOLD/SAVE] to generate the report.

CO Reports

There are two CO Reports available for analysis of CO line group status:

- *CO Traffic Summary Report* - provides statistics for the status of a designated CO group.
- *Call Hourly Report* - Provides a information regarding hourly CO traffic patterns for the past 24 hour period

CONDITIONS

- The CO Traffic Summary report includes the following information:
  - *Peak Hour for All CO Groups* - provides the time period (in hours) that has the largest total usage for all CO groups for a specific day
  - *Group Number* - identifies each CO group associated with the displayed data. Group numbers are displayed in numeric (ascending) order
  - *Number of CO* - the number of CO lines in a particular group
  - *Analysis Start Hour* - the time at which recording of data began
  - *Total Usage* - Total usage for all CO lines in a particular CO group (including the total time that the CO lines are busy during the measurement period.

    NOTE: Total usage counts each time a CO line is seized for use by both incoming and outgoing calls.
  - *Total Attempt* - the number of attempted incoming and outgoing calls for a particular CO group
  - *Incoming Attempt* - the number of attempted incoming calls for a particular CO group
  - *Outgoing Attempt* - the number of outgoing call attempt in the CO group.
  - *Group Overflow* - the number of calls for a particular CO group that were not completed (not including calls denied because of an authorization issue)
  - *Percentage All CO Busy* - the percentage of time that all CO lines in the CO group are simultaneously in use during the specified time period.
  - *Percentage Fail to Attempt Outgoing* - the percentage of outgoing calls that were not completed by the CO group (not including calls denied because of an authorization issue, or unanswered calls)
- The CO Traffic Summary report includes statistical information for the following time periods:
  - Last Hour
  - Today’s peak time
  - Yesterday's peak time
  - Yesterday's total
  - Today's total

- The following is an example of a CO Group Summary Report - Yesterday's total:

```
=======================================================
Site Name:
Report Type : CO Group Summary Report - Yesterday Total
Date: 02/12/08 13:15
=======================================================
 Peak Hour For All CO: 10:00
 Grp Num Anal  Total  Total  Inc.  Out.  Grp   %    %
 No COs Hour  Usage Seize Seize Seize Ovfl ACB FAO
  1   62 --:-- 1319  1050 269   781 0   0   ---
```

OPERATION / SETUP

To print the CO Traffic Summary Report from the Main Attendant station:

1. Press [TRANS/PGM].
2. Enter 0128, then select the Measurement Time type.
3. Press [HOLD/SAVE] to generate the report.

To print the CO Traffic Hourly Report from the Main Attendant station:

1. Press [TRANS/PGM].
2. Enter 0129, then the CO group number.
3. Press [HOLD/SAVE] to generate the report.

Hardware (H/W) Unit Reports

This report provides statistics for analysis regarding the usage and availability of various system HW resources (such as DTMF Receiver, VMIB, and CPTU).

CONDITIONS

- This report includes the following information:
  - *Type* - the type of H/W unit being measured.
  - *Number of Unit* - the total number of installed H/W units
  - *Analysis Start Hour* - the time at which recording of data began or the hour with the highest Peak Req. measurement
  - *Total Requests* - The total number of call processing requests (system-wide) during the designated time period (hour) involving DTMF, CPTU, and VMIB.
  - *Total Demand* - The total number of denied requests (system-wide) during the designated time period (hour) because there were no H/W unit available.

- This report includes statistical information for the following time periods:
  - Last Hour
  - Today's peak time
  - Yesterday's peak time
  - Yesterday's total
  - Today's total
- The following is an example of a H/W Unit Usage Summary Report - Yesterday's total:

```
=======================================================
Site Name:
Report Type : H/W Unit Usage Summary Report - Yesterday Total
Date: 02/12/08 13:15
=======================================================
 Unit  Num  Anal  Total  Total
 Type Unit  Hour  Req  Denied
 VMIB  4   --:--   27 0
 DTMF 13   --:--  27 0
 CPTU 12  --:-- 27 0
```

OPERATION / SETUP

To print the H/W Unit Usage Summary Report at the Main Attendant station:

1. Press [TRANS/PGM].
2. Enter 0127, then select the Measurement Time type.
3. Press [HOLD/SAVE] to generate the report.

Other Programming Tables

Station Attributes 1 (PGM 111)

Enter appropriate station range and follow specific procedure:

Howling Tone (SLT) -- if value is set to ON, the system gives a howling (loud error) tone when the phone is in the off-hook state without action for an extended period of time.	PGM 111 + FLEX 5 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Ring Type -- if value is not 0 (OFF), the selected ring type is heard at the called party station of an intercom call.	PGM 111 + FLEX 9 + 1 (Ring Type) + [HOLD/SAVE]	Values - 0 = OFF 1 = Ring Type 2 = Ring Type 3 = Ring Type 4 = Ring Type
VMIB Slot -- slot number of VMIB to be used.	n/a	VALUES -- Only one slot used
Error Tone for Telephone Answering Device (TAD) -- if value is set to ON, and a TAD is used on the SLT port, when the caller hangs up, a busy tone will be provided to the TAD instead of an error tone.	PGM 111 + FLEX 14 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
SLT Flash Drop -- if value is set to ON, a CO Call can be dropped by pressing the [FLASH] button or Hook Flashing.	PGM 111 + FLEX 15 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Flash Drop 2 = Flash Ignore 3 = Hold Release
SIP User ID Table Index -- User ID table index for SIP outgoing call's caller ID information. If 00, then the SBX IP makes caller ID based on station number. If 01-32, then programmed ID in user ID table (SIP Attributes 2 at PGM 501) is used.	PGM 111 + FLEX 23 + Value + [HOLD/SAVE]	VALUES -- 00-32
Listen Redial DTMF -- if value is set to ON, DTMF tone is heard by the station user while redialing.	PGM 111 + FLEX 24 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Station Attributes 2 (PGM 112)

Enter appropriate station range and follow specific procedure:

CO Warning Tone -- used to restrict outgoing call time. If this value is set to ON, the station user will receive a warning tone during a CO call after the timer expires	PGM 112 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On PGM 180 - FLEX 22
Individual CO Line Access -- if value is set to ON, the Station User can access an individual CO line by dialing the individual CO access code.	PGM 112 + FLEX 4 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable PGM 107 - FLEX 8
Prepaid Call -- if value is set to ON, the station user can use the Prepaid Call feature.	PGM 112 + FLEX 8 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Fax Mode -- if value is set to ON, a single ring is provided and Attendant recall is not operated.	PGM 112 + FLEX 11 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
UCD Group Service -- used when a station receives a DID/DISA call. If value is set to ON, the UCD Group the station belongs to will receive the incoming call. If this value is set to OFF, the station receives the incoming call directly whether the station is busy or not.	PGM 112 + FLEX 13 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Ring Group Service -- used when a station in a Ring Group receives a DID/DISA call. If value is set to ON, the Ring Group the station belongs to will receive the incoming call. If this value is set to OFF, the station receives the incoming call directly.	PGM 112 + FLEX 14 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Line Length (SAF only) -- N/A This feature is used to distinguish the line length when the distance between the stations and the station boards is too variable.	PGM 112 + FLEX 16 + 0 (Short) + [HOLD/SAVE]	VALUES -- 0 = Short: 0 km 1 = Long: 0-3 km 2 = Far: 3-7.5 km
Message Scroll Speed (Korea only) -- N/A The scroll speed of SMS or broadcasting notice message.	PGM 112 + FLEX 17 + 3 (Value) + [HOLD/SAVE]	VALUES -- 0 = Fastest 1-6 = Slower by no. 7 = Slowest

Block Back Call for SLT -- if value is set to ON, SLT recalling is blocked after pressing the [FLASH] button.	PGM 112 + FLEX 18 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
I-Time RST (Incoming CO call time restriction) -- if value is set to ON, the conversation time of an incoming CO call is limited. After CO Call Restriction Timer expires, the call is forced to disconnect.	PGM 112 + FLEX 19 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Reserved	PGM 112 + FLEX 21	-
Door Open -- if value is set to ON, the programmed station can open a designated door by dialing the assigned Door Open Code.	PGM 112 + FLEX 22 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Station Attributes 3 (PGM 113)

Enter appropriate station range and follow specific procedure:

Group Listening -- if value is set to ON, the station user can use group listening, while on a handset call by pressing the [SPEAKER] button; other people in the vicinity will be able to hear the conversation through the speaker. NOTE: Only the voice of the user on the handset will project their voice to the user on the other end of the call.	PGM 113 + FLEX 3 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable
SMDR Hidden Dialed Digits -- if value is set to ON, the dialed number of a CO Call will on appear on the SMDR record.	PGM 113 + FLEX 5 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable
Alarm Attribute -- if value is set to ON, the station will be able to receive alarm signals.	PGM 113 + FLEX 10 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Mute Ring Service -- if value is set to ON, the station can get muted ring.	PGM 113 + FLEX 11 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Call Coverage -- the user can enable or disable the Call Coverage function by pressing TRANS/PGM + 451.	PGM 113 + FLEX 18 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Back Light -- a value of OFF means that the Back Light is never illuminated. A value of BUSY means that the Back Light is illuminated when the phone is off hook. A value of ON means that the Back Light is always illuminated.	PGM 113 + FLEX 20 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = Busy 2 = On

Station Attributes 4 (PGM 114)

Enter appropriate station range and follow specific procedure:

Connected Line Identification Presentation (COLP) LCD Display -- if value is set to ON, the connected party CLI is displayed on the station's LCD.	PGM 114 + FLEX 2 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
CLI / Redirect Display (RED) -- if value is set to RED, the redirected CLI is displayed. Otherwise, the original CLI is displayed when using networking.	PGM 114 + FLEX 3 + 0 (CLI) + [HOLD/SAVE]	VALUES -- 0 = CLI 1 = RED
EXT or CO ATD -- if value is set to ATD, CO ATD code is used for outgoing CLI information. Otherwise, the station number is used as CLI information.	PGM 114 + FLEX 5 + 0 (EXT) + [HOLD/SAVE]	VALUES -- 0 = EXT 1 = ATD (PGM 200)
Keypad Facility -- if value is set to KEYPAD, ISDN Station sends digits in the Keypad Facility after a call is connected. Otherwise DTMF is used.	PGM 114 + FLEX 6 + 0 (DTMF) + [HOLD/SAVE]	VALUES -- 0 = DTMF 1 = Keypad
Long/Short -- if value is set to LONG, the ISDN Station acts in the LONG passive mode.	PGM 114 + FLEX 7 + 0 (Short) + [HOLD/SAVE]	VALUES -- 0 = Short 1 = Long
CPN Type -- designates the Called Party Number (CPN) type. If value is set to 0, all SO stations of the S port will be ringing.	PGM 114 + FLEX 8 + 0 (Do not send CPN to S0) + [HOLD/SAVE]	VALUES -- 0 = Do not send CPN to S0. 1 = Send Station number as CPN 2 = Bypass CPN from the Network.
SO Sub Address -- indicates how the sub-address is used in the SETUP message. If value is set to 0, the station sub-address not used. If set to 1, the sub-address is filled in the CPN field of the SETUP message. Otherwise, the sub-address is filled in the CPSN (Called Party Sub-address Number) field of the SETUP message.	PGM 114 + FLEX 9 + 0 (Station sub-address not used) + [HOLD/SAVE]	VALUES -- 0 = Station sub-address not used. 1 = Station sub-address IN CPN 2 = Station sub-address IN CPSN
Progress Indication -- if value is set to ON, the Progress Indicator shows non-ISDN devices.	PGM 114 + FLEX 13 + 0 (Off)+ [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

ISDN COLR -- if value is set to ON, the connected party's CLI information is restricted by the PX.	PGM 114 + FLEX 15 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
CLI Type -- designates CLI type: Station CLI Long (max. 12), or Short for a station with a normal CLI (max. 4).	PGM 114 + FLEX 18 + 0 (Short) + [HOLD/SAVE]	VALUES -- 0 = Short 1 = Long
Long Station CLI -- if outgoing CLI is activated and CLI type is EXT (Station), this value is used as the outgoing CLI.	PGM 114 + FLEX 19 + Value (max. 12 digits) + [HOLD/SAVE]	VALUES -- Range=0-9
MSN Wait -- N/A If this value is set to ON, a busy station can receive a call waiting signal when another MSN call is received.	PGM 114 + FLEX 20	VALUES -- 0 = Off 1 = On
Long CLI1 -- if CLI type of outgoing CO line is set to 1, Long CLI 1 is sent. - See PGM 143 - F12 (CLI Type)	PGM 114 + FLEX 21+ Value (max. 16 digits) + [HOLD/SAVE]	VALUES -- Range = 0-9
Long CLI2 -- if CLI type of an outgoing CO line is set to 2, Long CLI 2 is sent.	PGM 114 + FLEX 22 + Value (max. 16 digits) + [HOLD/SAVE]	VALUES -- Range = 0-9
Collect Call Blocking -- blocks collect calls if set to ON.	PGM 114 + FLEX 23 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

SMDR Account Group (PGM 124)

Enter appropriate station range and follow specific procedure:

SMDR Account Group -- stations can be assigned as a member of a call account group on SMDR. A station belongs to only one group.	PGM 124 + 01 (Account Group, 00-23) + [HOLD/SAVE]	00 = not assigned

Copy DSS Button (PGM 125)

Enter appropriate station range and follow specific procedure:

Copy DSS Button -- the assigned DSS button can be copied to another station or ICM group.	Copy DSS to Station: + FLEX 1 + Station Number + [HOLD/SAVE] Copy DSS to ICM Group: + FLEX 2 + ICM Group (Range=1-5) + [HOLD/SAVE]	VALUES -- Delete= [CONF] Button

Station IP List (PGM 126)

In this program mode, an IP Address can be programmed for each station. This IP Address is used to service first CTI through LAN.

1. Press the [TRANS/PGM] button and dial 126.
2. Enter bin number for station number (01-48).
3. Enter IP Address (12 Digits). Periods are inserted automatically after the first 3 digits are entered and after the next 3 digits until the entire address is entered.

Display Station Number By COS / By CO Group (PGM 130-131)

Display Station Number by COS -- display Station Number by COS.	Show Station by assigned Day COS: PGM 130 + FLEX 1 + 1 (COS, Range=1-9) Show Station by assigned Night COS: PGM 130 + FLEX 2 + 1 (COS, Range=1-9)	VALUES -- FLEX 1 = DAY FLEX 2 = Night NAVIGATION -- Next page: Volume Up/Down Key
Display Station Number by CO Access Group -- station numbers that access certain CO Line Groups could be checked. The LCD shows stations that are assigned to access CO Line Group 1.	PGM 131 + 01 (CO Line Group, Range = 01-24)	NAVIGATION -- Next page: Volume Up/Down Key

CO Line (PGM 140-146)

CO Service Type (PGM 140)

Reserved -- N/A	PGM 140 + FLEX 1 + 2 + [HOLD/SAVE]	VALUES --
Reserved -- N/A	PGM 140 + FLEX 1 + 4 + [HOLD/SAVE]	VALUES --

CO Line Attributes 1 (PGM 141)

Enter appropriate CO line range (01-12) and follow the specific procedure shown in the Table.

CO Line Assign -- designates the CO Line type.	PGM 141 + FLEX 4 + 0 (Pol) + [HOLD/SAVE]	VALUES -- 0 = Loop Start (Loop) 1 = Polarity Reverse (Pol)
CO Line Type -- designates the CO Line type.	PGM 141 + FLEX 5 + 0 (CO) + [HOLD/SAVE]	VALUES -- 0 = CO 1 = PBX
CO Line Signal Type -- designates the CO Line signaling type.	PGM 141 + FLEX 6 + 1 (DTMF) + [HOLD/SAVE]	VALUES -- 0 = PULSE 1 = DTMF

Tenancy Group -- designates the ICM Tenancy group number a CO belongs to. If value is set, separate Day/Night ring mode is applied to incoming CO Calls according to ICM Tenancy group Attendant Day/Night ring mode.	PGM 141 + FLEX 10 + 0 (Tenancy Group) + [HOLD/SAVE]	VALUES -- Range = 0-5 (see PGM 120)
CO Start Signal -- designates a loop closure or a ground as the "connect" (start) signal on an analog CO Line.	PGM 141 + FLEX 12 + 0 (Loop) + [HOLD/SAVE]	VALUES -- 0 = Loop 1 = Ground (*not US*)

CO Line Attributes 2 (PGM 142)

Enter appropriate CO line range (01-12) and follow the specific procedure shown in the Table

Metering Unit -- N/A This designates the unit used to detect pulses from the CO Line. There are 7 metering signal types (refer to VALUES).	PGM 142 + FLEX 3 + Metering Signal type + [HOLD/SAVE]	VALUES -- 00 = None 01 = 50 Hz 02 = 12 KHz 03 = 16 KHz 04 = Sing Polar Rev 05 = Plural Polar Rev 06 = No Polarity Rev
Line Drop using CPT (Call Progress Tone) -- if value is set to ON, CPT checks the incoming CO Line when answered and if CPT detects a dial tone, the system should drop the line for toll restriction.	PGM 142 + FLEX 4 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
PABX CO Dial Tone -- if value is set to YES, PX or PABX provides the CO Dial Tone; otherwise, the SBX IP system provides it.	PGM 142 + FLEX 7 + 0 (No) + [HOLD/SAVE]	VALUES -- 0 = No 1 = Yes
PABX CO Ring Back Tone -- if value is set to YES, PX or PABX provides a CO Ring Back Tone; otherwise, the SBX IP system provides it.	PGM 142 + FLEX 8 + 0 (No) + [HOLD/SAVE]	VALUES -- 0 = No (System) 1 = Yes (PBX)
PABX CO Error Tone -- if value is set to YES, PX or PABX provides a CO Error Tone; otherwise, the SBX IP system provides it.	PGM 142 + FLEX 9 + 0 (no) + [HOLD/SAVE]	VALUES -- 0 = No (System) 1 = Yes (PBX)
PABX CO Busy Tone -- if value is set to YES, PX or PABX provides the CO Busy Tone; otherwise, the SBX IP system provides it.	PGM 142 + FLEX 10 + 0 (NO) + [HOLD/SAVE]	VALUES -- Default = NO 0 = No (System) 1 = Yes (PBX)

PABX CO Announce Tone -- if value is set to YES, PX or PABX provides the CO Announce Tone; otherwise, the SBX IP system provides it.	PGM 142 + FLEX 11 + 0 (NO) + [HOLD/SAVE]	VALUES -- 0 = No (System) 1 = Yes (PBX)
Line Length -- N/A This is used to determine the line length when the CO Line length is too variable (SAF only).	PGM 142 + FLEX 14 + 0 (SHORT) + [HOLD/SAVE]	VALUES -- 0 = Short 1 = Long
DISA Answer Timer -- the system answers a DISA call after this time.	PGM 142 + FLEX 15 + 5 (1 digit) + [HOLD/SAVE	VALUES -- Range = 1-9
DISA Delay Timer (CIS only) -- N/A After this timer, the DTMF Receiver is attached after the DISA line is answered.	PGM 142 + FLEX 16 + 2 (1 digit) + [HOLD/SAVE]	VALUES -- Range = 1-9
SMDR Print -- if value is set to ON, SMDR record is printed.	PGM 142 - FLEX 17	VALUES -- 0 = No 1 = Yes
Busy/Error CPT Detect -- if value is set ON, a CO call is dropped when a CPT is detected from the CO. This applies to CO-to-CO call as well as a normal incoming or outgoing call. To detect a tone from the CO line, a CPT detection board is required.	PGM 142 - FLEX 18	VALUES -- 0 = Off 1 = On
LD Delay Count (CIS Only) -- after sending Long Distance Code, the Pause Time will be added automatically.	PGM 142 + FLEX 19 + 0 (VALUE)	VALUES -- 0-5

ISDN CO Line Attributes (PGM 143)

Enter appropriate CO line range (01-12) and follow the specific procedure shown in the Table

COLP Table Index -- if value is set to 50, the CLI of this CO Line refers to PGM 114 - FLEX 5. If value is set to 00-49, the CLI of this CO Line refers to COLP Table (PGM 201).	PGM 143 + FLEX 1 + 00 + [HOLD/SAVE]	VALUES -- Range = 00-50
DID Remove Number -- if value is not 0, and the CO Line is a DID Line, the system will discard the incoming DID digits up to the amount of this value (ex., if value is set to 02 and the outside caller dials '01245,' the first two digits are removed).	PGM 143 + FLEX 5 + 00 (Remove Number) + [HOLD/SAVE]	VALUES -- Range = 00-99

ISDN Enblock Send -- if value is set to ON, Enblock Sending Mode is applied to outgoing CO calls. It is also applied to VOIP CO lines.	PGM 143 + FLEX 6 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off, Overlap Sending Mode 1 = On, Enblock Sending Mode
Numbering Plan ID -- used for the Numbering Plan ID of ISDN calls and the calling party number (refer to VALUES).	PGM 143 + FLEX 8 + FLEX1 (FLEX 1=Calling, FLEX 2=Called) + 0 (unknown) + [HOLD/SAVE]	VALUES - 0 = unknown 1 = ISDN / Telephony 2 = not used 3 = DATA 4 = TELEX 5 = NOT USED 6 = National Std 7 = Private
ISDN Call Deflection / Rerouting -- if value is set to ENABLE, the ISDN call deflection or rerouting service is available.	PGM 143 + FLEX 9 + 0 (No Call Deflection) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable
ISDN 1 Digit Remove --	PGM 143 + FLEX 10 + 0 (OFF) + [HOLD/SAVE]	VALUE - 0 = Off 1 = On
ISDN Call Proc. Inband Msg (Italy only) -- N/A If value is set to ON, Inband info in call proceeding is available.	PGM 143 + FLEX 11 + 0 (OFF) + [HOLD/SAVE]	VALUE - 0 = Off 1 = On
CLI Type -- if value is set to 0, the CLI is Normal (refer to PGM 200/PGM 114). If value is set to 1 or 2, the CLI is Long CLI (Station Long CLI 1 or 2).	PGM 143 + FLEX 12 + 0 (Normal) + [HOLD/SAVE]	VALUES -- 0 = Normal 1 = Long CLI 1 2 = Long CLI 2
Reserved	PGM 143 + FLEX 13	-
Screening -- this function is related to ISDN ETSI SPEC. When ISDN outgoing call is established, ISDN Setup message has a CLI field with a SCREENING INDICATOR element.	PGM 143 + FLEX 14 + 0 (VALUE) + [HOLD/SAVE]	VALUES - 0 = User provided, No S 1 = User provided, Pass 2 = User provided, Fail 3 = Network provided
Prefix Table Index -- N/A Dialing Service by prefix code.	PGM 143 + FLEX 16	(Ukraine - not used)

Deny Incoming Call -- if value is set to ON, the incoming call is disconnected.	PGM 143 + FLEX 17 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Drop If No CLI --	PGM 143 + FLEX 19 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

CO Line Attributes 3 (PGM 146)

Enter appropriate CO line range (01-12) and follow the specific procedure shown in the Table

Incoming Prefix Code Insertion -- if value is set to ON, prefix code will be attached in front of incoming CLI information	PGM 146 + FLEX 1 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Outgoing Prefix Code Insertion -- if value is set to ON, prefix code will be attached in front of outgoing CLI information.	PGM 146 + FLEX 2 + 1 (ON) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
ISDN Line Type -- used to set the ISDN CODEC Type.	PGM 146 + FLEX 3 + 1 (μ-Law) + [HOLD/SAVE]	VALUES -- 0 = A-Law 1 = μ-Law
Calling Sub-address -- if value is set to ON, calling party sub-address of the ISDN station is attached when an ISDN station makes an outgoing CO call through this CO line.	PGM 146 + FLEX 4 + 1 (ON) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Collect Call Blocking -- if feature is set to 1 or 2, incoming collect calls are blocked.	PGM 146 + FLEX 7 + 0 (VALUE) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = With Indicator 2 = Without Indicator
Collect Call Answer Timer -- in case of "WITHOUT INDICATOR" collect call blocking, an incoming call is answered during this time. Then the CO loop is opened.	PGM 146 + FLEX 8 + 010 (VALUE) + [HOLD/SAVE]	VALUES -- 1-250 (100ms 3 digits)
Collect Call Idle Timer -- case of "WITHOUT INDICATOR" collect call blocking, an incoming call is answered during "Collect Call Answer Timer". Then the CO loop is opened during this time and the CO is answered again.	PGM 146 + FLEX 9 + 020 (VALUE) + [HOLD/SAVE]	VALUES -- 1-250 (100ms 3 digits)

CO Line CID Attributes (PGM 147)

Russia CID -- N/A (Russia only)	PGM 147 + FLEX 3 through FLEX 9	VALUES --

Slot Base Program (PGM 155)

Board Attributes (PGM 155)

R2 CRC Check -- if value is set to Enable, the R2 CRC is checked.	PGM 155 + Slot Number of E1IB (06) + FLEX 1 + 0 (VALUE) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable
Distance Coefficient Setting -- when the switch for selection long loop on the board is set to "Long", the gain value is set according to the Distance Coefficient. (Applied to LCOB/SLIB/HYBRID.)	PGM 155 + Slot Number of LCOB/SLIB/HYBRID + FLEX 2 + 0 (0 Km) + [HOLD/SAVE]	VALUES -- 0 = 0 Km 1 = 3 Km 2 = 5 Km 3 = 7 Km
DCO IP Address -- IP Address of E1IB.	PGM 155 + Slot Number of E1IB (06) + FLEX 3 + IP addr + [HOLD/SAVE]	--
DCO Gateway IP Address -- Gateway IP Address of E1IB.	PGM 155 + Slot Number of E1IB (06) + FLEX 4 + IP addr + [HOLD/SAVE]	--
DCO Subnet Mask -- Subnet Mask of E1IB.	PGM 155 + Slot Number of E1IB (06) + FLEX 5 + Subnet mask + [HOLD/SAVE]	--
DCO Server IP -- Server IP Address of E1IB.	PGM 155 + Slot Number of E1IB (06) + FLEX 6 + IP addr + [HOLD/SAVE]	--
DCO Master Clock -- set this board as a Master party or Slave party.	PGM 155 + Slot Number of E1IB (06) + FLEX 7 + 0 (SLAVE) + [HOLD/SAVE]	--
PLL SSCG (N/A) -- for hardware engineering tests.	PGM 155 + FLEX 8 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

T1 Setup Mode -- sets ESF or D4 Frame parameters for T1. ESF: Using Data Link Message D4 Frame: Using In-band Control Protocol	PGM 155 + FLEX 9 + 0 (D4) + [HOLD/SAVE]	VALUES -- 0 = D4 1 = ESF
T1 Line Mode -- select T1 line mode (AMI/B8ZS).	PGM 155 + FLEX 10 + 0 (B8ZS) + [HOLD/SAVE]	VALUES -- 0 = B8ZS 1 = AMI

System Data (PGM 160-184)

System Attributes 1 (PGM 160)

Camp RBT/MOH -- Music on hold (MOH) or Ring Back Tone (RBT) is heard during the camp-on state.	PGM 160 + FLEX 2 + 0 (MOH) + [HOLD/SAVE]	VALUES -- 0 = MOH 1 = RBT
ICM Continuous Dial-Tone -- sets whether ICM dial tone is continuous.	PGM 160 + FLEX 5 + 1 (Continuous) + [HOLD/SAVE]	VALUES -- 0 = Non-continuous 1 = Continuous
Print LCR Converted Digit -- if value is set to ON, LCR-converted digits are displayed on the LCD with SMDR data; otherwise, the originally-dialed digits are shown.	PGM 160 + FLEX 10 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Off-net Prompt Usage -- if value is set to ON, the off-net VMIB announcement (prompt) will be heard when a call is Off-net call forwarded; this only applies to calls transferred within the system.	PGM 160 + FLEX 12 + 1 (ON) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Off-net DTMF Tone -- if value is set to ON, the DTMF dial tone will be heard by the outside caller when the call is Off-net call forwarded; this only applies to calls transferred within the system.	PGM 160 + FLEX 13 + 1 (ON) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Voice Path Connect -- if value is set to IMM (immediate), voice path is connected immediately for CO outgoing calls; otherwise, calls are connected after dialing digits.	PGM 160 + FLEX 14 + 0 (DGT) + [HOLD/SAVE]	VALUES -- 0 = DGT 1 = IMM
Transfer Tone -- while a call is transferred to a destination station, if this value is set to RBT, transferred Station will hear a ring back tone; otherwise, music on hold will be heard.	PGM 160 + FLEX 15 + 0 (RBT) + [HOLD/SAVE]	VALUES -- 0 = RBT 1 = MOH

CO to CO Transfer CPT Detection -- (not used) *Moved to PGM 142 - FLEX 18*	PGM 160 + FLEX 16	VALUES --
ACD Package Usage -- if value is set to ON, ACD information is printable.	PGM 160 + FLEX 17 + 0 (OFF) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Reserved	PGM 160 + FLEX 20	VALUES --
SIP Pound Usage -- if value is set to ON, when using a SIP trunk, a user can use '#' or '*' as digits. If value is set to OFF when a user uses a SIP trunk and the user dials '#'', then the system sends all the digits that the user dialed before '#' to the SIP trunk network. The '#' symbol is not transmitted to the network. A user can not use '#' as a digit, only 0~9, *.	PGM 160 + FLEX 21 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

System Attributes 2 (PGM 161)

PX Time/Day/Month -- if value is set to ON, the system time/date is set by the network time/date. Note: You must have an IP connection.	PGM 161 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Off-Hook Ring Type -- the off-hook ring type in the system can be set to mute or a one burst ring.	PGM 161 + FLEX 2 + 1 (Mute) + [HOLD/SAVE]	VALUES -- 0 =Burst 1 = Mute
Single Ring for CO Call -- if value is set to YES, a CO call ring is a single ring and an ICM call ring is a double ring. If value is set to NO, then a CO call ring is double ring and an ICM call ring is single ring. Single ring cadence is 1sec ON/ 4sec OFF. Double ring cadence is 0.4s ON/ 0.2s OFF/ 0.4s ON/ 4sec OFF.	PGM 161 + FLEX 7 + 0 (No) + [HOLD/SAVE]	VALUES -- 0 =No 1= Yes
WTU Auto Release -- N/A	PGM 161 + FLEX 8 + 0 (Off) + [HOLD/SAVE]	*Reserved*
VMIB Prompt Gain -- this value is the gain of the VMIB Prompt. Whenever the VMIB prompt is played, this value is applied.	PGM 161 + FLEX 12 + 08 + [HOLD/SAVE]	VALUES -- Range = 00-31
CLI Information at VM SMDI (Simplified Message Desk Interface) --	PGM 161 + FLEX 13 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

ACD Print Timer Unit -- value determines the unit of ACD print timer.	PGM 161 + FLEX 14 + 0 (Sec) + [HOLD/SAVE]	VALUES -- 0 = Sec 1 = Hour Range: 1 hr-10sec (PGM 161 - FLEX 10)
Set VM SMDI Type -- value sets the VM SMDI type.	PGM 161 + FLEX 15 + 0 (Type I) + [HOLD/SAVE]	VALUES -- 0 = Type I 1= Type II
NO DSS Indication -- if value is set to ENABLE, the LED indication of the {CO} or {DSS} button is blocked (ex., LED does not flash even if there is an incoming call to the assigned CO Line or Station). This feature does not apply for direct calls such as DID/DISA.	PGM 161 + FLEX 18 + 0 (Disable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable
UK Billing Mode -- N/A If value is set to ON, the UK Billing Mode is applied. (UK Only)	PGM 161 + FLEX 19 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
COS 7 When Authorization Fails -- if value is set to ON, the Station COS will temporarily be changed to 7 when an invalid authorization code is entered at the Station. COS can be recovered by activating COS RESTORE. If not assigned, the day & night COS in PGM 116 will be changed to 7 when an invalid authorization code is entered at the station. To recover COS, day & night COS should be reassigned.	PGM 161 + FLEX 20 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
LCR Dial Tone Detect -- if value is set to ON, the SBX IP system first checks if the CO provides dial tone in case if analog CO is seized for LCR dialing. If there's no dial tone, the call is rerouted to the Alternate DMT Index. If LCR type is set to M13, the LCR dial tone detect option is not applied.	PGM 161 + FLEX 22 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

DID/DISA Destination (PGM 167)

Reroute Busy Destination -- when a DID/DISA call is rerouted by the no answer forward/CCR and if the rerouted destination is busy, calls will follow the Reroute Busy Destination.	PGM 167 + FLEX 6 + FLEX 1 (VALUES) + 0 (Off) + [HOLD/SAVE]	FLEX 1 = Tone FLEX 2 = ATD FLEX 3 = Hunt (Not supported at E1 CO line.)
Reroute Error Destination -- when a DID/DISA call is rerouted by the no answer forward/CCR state and if the rerouted destination returns an error, calls will follow the Reroute Error Destination.	PGM 167 + FLEX 7 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	FLEX 1 = Tone FLEX 2 = ATD FLEX 3 = Hunt (Not supported at E1 CO line.)
Reroute No Answer Destination -- if No Answer Destination is busy, the call will be rerouted to Reroute No Answer Destination (Tone / Attendant / Hunt).	PGM 167 + FLEX 8 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	FLEX 1 = Tone FLEX 2 = ATD FLEX 3 = Hunt (Not supported at E1 CO line.)

Music Assignment (PGM 171)

BGM Type -- Background Music type.	PGM 171 + FLEX 1 + 1 (VALUE) + [HOLD/SAVE]	VALUES -- 0 = not assigned 1 = Int. Music 2 = External Music 3 = **n/a** 4-8 = SLT MOH 1-5
Assign SLT MOH -- to assign an SLT Music On Hold, set the value and match the SLT station number for the SLT port.	PGM 171 + FLEX 4 + FLEX (Range: FLEX 1-5) + SLT Station Number + [HOLD/SAVE]	VALUES -- FLEX 1= SLT MOH 1 FLEX 2= SLT MOH 2 FLEX 3= SLT MOH 3 FLEX 4= SLT MOH 4 FLEX 5= SLT MOH 5
Dial Tone Source -- to assign an external dial tone, set the SLT station number of the SLT port.	PGM 171 + FLEX 5 + SLT MOH (Range 0-5) + [HOLD/SAVE] 0 = Not Assigned (default)	VALUES -- 1 = SLT MOH 1 2 = SLT MOH 2 3 = SLT MOH 3 4 = SLT MOH 4 5 = SLT MOH 5

ICM Ring Back Tone (RBT) -- to assign an external ICM ring back tone, set the SLT Station number of the SLT port.	PGM 171 + FLEX 6 + SLT MOH (Range 0-5) + [HOLD/SAVE] 0 = Not Assigned (default)	VALUES -- 1 = SLT MOH 1 2 = SLT MOH 2 3 = SLT MOH 3 4 = SLT MOH 4 5 = SLT MOH 5
CO Ring Back Tone (RBT) -- to assign external DID ring back tone, set the SLT station number of the SLT port.	PGM 171 + FLEX 7 + SLT MOH (Range 0-5) + [HOLD/SAVE] 0 = Not Assigned (default)	VALUES -- 1 = SLT MOH 1 2 = SLT MOH 2 3 = SLT MOH 3 4 = SLT MOH 4 5 = SLT MOH 5

PBX Access Code (PGM 172)

PBX Access Code -- a maximum 4 PABX Access Codes can be assigned. A PABX Access Code is a 1 or 2-digit number.	PGM 172 + FLEX 1 (FLEX 1-4) + 9 (1 or 2 digits) + [HOLD/SAVE]	VALUES -- Default = not assigned Range = *,#,1-99

Print Port Selection (PGM 175)

Off-line SMDR / Statistics Print -- off-line SMDR data can be printed through this port.	PGM 175 + FLEX 1 + 01 (Value)+ [HOLD/SAVE]	VALUES -- Range = 01-11
Admin Data -- when PGM 451 is used, the Admin data can be printed through this port.	PGM 175 + FLEX 2 + 01 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11
SMDI Print -- SMDI data can be printed through this port.	PGM 175 + FLEX 4 + 01 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11
Call Information -- call information data can be printed through this port.	PGM 175 + FLEX 5 + 01 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11
Info / On-line SMDR -- on-line SMDR data can be printed through this port.	PGM 175 + FLEX 6 + 01 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11
Trace -- trace data can be printed through this port.	PGM 175 + FLEX 7 + 01 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11
Debug -- debug data can be printed through this port.	PGM 175 + FLEX 8 + 01 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11

PC Admin -- PC Admin can be connected through this port.	PGM 175 + FLEX 9 + Auto Select + [HOLD/SAVE]	VALUES -- port number
PC Attendant -- PC Admin can be connected through this port.	PGM 175 + FLEX 10 + 08 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11
CTI -- CTI can be connected through this port.	PGM 175 + FLEX 11 + 09 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-11
Remote Diagnostic -- N/A Remote Diagnostic data can be printed through this port.	PGM 175 + FLEX 12	VALUES -- port number

Pulse Dial Ratio (PGM 176)

Pulse Dial Ratio -- Pulse dial speed ratio is set only for 10 PPS.	PGM 176 + FLEX 1 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = 10 PPS 60/40% 1 = 10 PPS 66/33%

SMDR Attributes (PGM 177)

SMDR Long Distance Call Digit Counter -- outgoing calls are measured to see if the digit counters are exceeded. If so, the call is considered a long distance call.	PGM 177 + FLEX 4 + 07 Value + [HOLD/SAVE]	VALUES -- FLEX 4 or FLEX 14 Range = 07-15
Print Incoming Call -- if value is set to ON, all incoming calls can be printed.	PGM 177 + FLEX 5 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Print Lost Call -- if value is set to ON, lost calls are printed. Lost calls are defined as calls that are unanswered.	PGM 177 + FLEX 6 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Records in Detail -- if value is set to ON, not only total calls, total metering count, and total cost for individual station, but also the detailed call records are saved up to a maximum of 5000. If value is set to OFF, only total calls, metering count, and cost for individual station information will be recorded.	PGM 177 + FLEX 7 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

SMDR Dial Digit Hidden -- if value is set to a non-zero value, the printed digits from right or left will be replaced with a '*' symbol up to the designated value. The direction of right or left can be set at PGM 177 - FLEX 13.	PGM 177 + FLEX 8 + 0 Value + [HOLD/SAVE]	VALUES -- Range = 0-9
SMDR Currency Unit -- for easy identification of call costs, the currency unit can be entered with 3 alphabetic characters to be printed in front of call charge amount.	PGM 177 + FLEX 9 + Value (see Map on page D-50) + [HOLD/SAVE]	VALUES -- 3 characters
SMDR Cost Per Unit Pulse -- N/A This is the call cost per a cost metering pulse which is sent from the Central Office.	PGM 177 + FLEX 10	VALUES -- n/a
SMDR Fraction -- N/A This value means the decimal position point of the cost per unit pulse. In case the cost is 10.25 $ per a pulse, then 'SMDR Cost Per Unit Pulse' should be set as 1025 and 'SMDR Fraction' should be set '2' for there are 2 digits uner the point of 10.25 $.	PGM 177 + FLEX 11	VALUES -- n/a
SMDR Start Timer -- if value is set to a non-zero value, only the outgoing CO call lasting for more than this time value is served SDMR.	PGM 177 + FLEX 12 + 000 Value + [HOLD/SAVE]	VALUES -- Range = 000-250 (seconds)
SMDR Hidden Digit -- if value is set to RIGHT, SDMR digit hiding is executed in the right-to-left direction (ex., dialed number "1234567890", would be shown as "12345*****". If value is set to LEFT, SDMR digit hiding is executed to left-to-right direction, (ex., dialed number "1234567890", would be shown as "*****67890".	PGM 177 + FLEX 13 + 1 (Right) + [HOLD/SAVE]	VALUES -- 0 = Left 1 = Right
SMDR Long Distance Codes -- a long distance call is defined as a call that satisfies the condition of PGM 177 - FLEX 4, or PGM 177 - FLEX 14.	PGM 177 + FLEX 14 + FLEX 1 (Value) + 1 (Up to 2 digits, Range = *, #, 0-99) + [HOLD/SAVE]	VALUES -- Default = 0 max. 5 SMDR long distance codes Range = FLEX 1-5
MSN Print on SMDR -- if value is set to ON, the MSN number is printed instead of the Station number when an outgoing MSN call is made.	PGM 177 + FLEX 15 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Print Caller Number -- if value is set to ON, the caller number is printed when receiving an incoming SMDR call.	PGM 177 + FLEX 16 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
SMDR Interface Service -- N/A This is for specific application program for SMDR data. If this is ON, SMDR data is saved and sent when there is 'SMDR data request' from application software. In this case normal Off-line SMDR data cannot be saved nor printed. It means that if this admin is ON, then Offline SMDR function can not be used.	PGM 177 + FLEX 19	n/a
I-SMDR Connection Type -- determines port to be used for printer when SMDR interface service is set. SMDR Interface is served through LAN or SIO.	PGM 177 + FLEX 20 + 0 (SIO) + [HOLD/SAVE]	VALUES -- 0 = SIO 1 = LAN
I-SMDR Author Index -- this program determines the port type to be used for SMDR interface service. SMDR Interface is served through LAN or SIO.	PGM 177 + FLEX 21 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

System Time/Date Setting (PGM 178)

System Time -- sets the System time; Hour/Min in sequence (ex., for 11:30, enter 1130).	PGM 178 + FLEX 1 + Value (4 digits) + [HOLD/SAVE]	VALUES -- hhmm
System Date -- sets the System date; Month/Day/Year in sequence (ex., for January 27, 2009, enter 012709).	PGM 178 + FLEX 2 + Value + [HOLD/SAVE]	VALUES -- mmddyy
Daylight Saving Time (DST) Usage -- enables or disables the ability to automatically adjust the KSU for Daylight Saving Time.	PGM 178 + FLEX 3 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Daylight Saving Time (DST) Start -- sets the start month/week/day/& start time for Daylight Saving Time.	PGM 178 + FLEX 4 + VALUE + [HOLD/SAVE]	VALUES -- FLEX 1 = DST start month (00-12) FLEX 2 = DST start week (00-06) FLEX 3 = DST start day (00-07) FLEX 4 = DST start hour (00-24)
Daylight Saving Time (DST) End -- sets the end month/week/day/& start time for Daylight Saving Time.	PGM 178 + FLEX 5 + VALUE + [HOLD/SAVE]	VALUES -- FLEX 1 = DST start month (00-12) FLEX 2 = DST start week (00-06) FLEX 3 = DST start day (00-07) FLEX 4 = DST start hour (00-24)

System Timers (PGM 180-184)

System Timers 1(PGM 180)

Camp On Recall Timer -- when a call is transferred using Camp-On to a busy station, if the transferred-to station does not answer the call, it will recall to the transferring station after the designated time expires.	PGM 180 + FLEX 3 + 030 Seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-200
ACNR No Tone Retry Timer -- determines the number of attempts to secure a CO line for ACNR. If a CO line is not seized, ACNR will be canceled.	PGM 180 + FLEX 12 + 1 Value (1 digit) + [HOLD/SAVE]	VALUES -- Range = 1-9
CO Call Drop Warning Timer -- on prepaid CO calls, the system will give a warning tone that designates that the prepaid amount has been used. After the timer expires, the call will be disconnected. This is also used for call drop warning in Unsupervised Conferences.	PGM 180 + FLEX 16 + 10 sec (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
CO Call Restriction Timer -- N/A If value is set to 0, the time of outgoing CO calls is not restricted. If value is set to a non-zero value, outgoing CO calls are disconnected after the designated time.	PGM 180 + FLEX 17 + minutes (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
CO Dial Delay Timer -- used to prevent illegal dialing in case of slow response from the Central Office Line or PBX.	PGM 180 + FLEX 18 + 01 Value (100 msec, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
CO Release Guard Timer - designates the amount of time before a CO line can be re-seized, after a CO call disconnects; controls the time necessary to guarantee an idle loop state when a line is released.	PGM 180 + FLEX 19 + 020 Value (100 msec, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 001-150
CO Ring Off Timer -- used to designate the time interval between incoming ringing signals so that active ringing can be retained in the system until the timer expires.	PGM 180 + FLEX 20 + 060 Value (100 msec, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 001-150
CO Ring On Timer -- controls the time necessary to detect an incoming CO call ringing into the system.	PGM 180 + FLEX 21 + 2 VALUE (100 msec, 1 digit) + [HOLD/SAVE]	VALUES -- Range = 1-9
CO Warning Tone Timer -- N/A (For Korea only) This sets the amount of time before receiving a warning tone as a reminder of the elapsed call time on an outgoing CO line conversation.	PGM 180 + FLEX 22 + 180 Seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 060-900

VM Outbound Retry Count -- if value is set to 0, no retries will be made after the initial attempt when a new message is received.	PGM 180 + FLEX 23 + 2 (Value) + [HOLD/SAVE]	VALUES -- Range = 0-9
2nd Call Alert Timer --	PGM 180 + FLEX 24 + Value (secs) + [HOLD/SAVE]	VALUES -- Range = 000-255

System Timers 2 (PGM 181)

DID/DISA No Answer Timer -- used for DID or DISA call routing. If the station doesn't answer a DID/DISA call within the time allowed, the call will be routed to the assigned PGM 167 - FLEX 3 value.	PGM 181 + FLEX 2 + 25 seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-99
ICM Dial Tone Timer -- designates the time when an off-hook station will play the intercom dial tone before an error tone is provided.	PGM 181 + FLEX 7 + 10 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20
MSG Wait Reminder Tone Timer -- designates the amount of time between repeated message waiting reminder tones to the station.	PGM 181 + FLEX 9 + 00 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-60
Pause Timer -- used for speed dial or Last Number Redial; the SBX IP system sends the dialed digits to the outgoing CO line, after the designated time.	PGM 181 + FLEX 11 + 3 Seconds (1 digit) + [HOLD/SAVE]	VALUES -- Range = 1-9
3 Soft Auto Release Timer (3 soft key DKTU only) -- while in the 3 soft button menu, if no digits are pressed within the designated time, the DKTU will return to an idle state.	PGM 181 + FLEX 14 + 05 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-30
VM Pause Timer -- this is the amount of time a voice mail port will remain idle before taking another call.	PGM 181 + FLEX 15 + 30 Value (100 msec, 2 digits) + [HOLD/SAVE	VALUES -- Range = 01-99
Transit Connect Timer -- designates the amount of time before the master system sends a connect message to the slave system when using a pulse analog trunk.	PGM 181 + FLEX 16 + 04 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-30

LCO Connect Timer (**CIS only) -- N/A** To check LCO status after LCO is connected, the system assigns CPT periodically with this timer. To activate, CO - CO XFER CPT detect should be set to ON (PGM 160 - FLEX 16).	PGM 181 + FLEX 18 + 00 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-30
LCO CPT Detect Timer -- N/A To check LCO status after LCO is connected, the system assigns CPT periodically with this timer. To activate, CO - CO XFER CPT detect should be set to ON (PGM 160 - FLEX 16).	PGM 181 + FLEX 19 + 05 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 00-20

System Timers 3 (PGM 182)

Wink Timer (future feature) -- designates the amount of time needed to acknowledge a signal on a DID line.	PGM 182 + FLEX 9 + 010 Value (10 msec, 3 digits) + [HOLD/SAVE]	VALUES -- Range = 010-200
Enblock Digit Timer -- designates the amount of time allowed before enblock dialing is activated when the user is making an enblock dialing mode call.	PGM 182 + FLEX 10 + 05 Value (10 sec, 2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20
CCR Time Out Timer -- N/A > CCR Time Out can be controlled via the InterDigit Timer in PGM 181 Button 8. Note: This timer must be longer than the CCR InterDigit Timer. Changing the InterDigit Timer will impact other functions.	PGM 182 + FLEX 11 + 015 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 000-300
DID Inter-digit Timer -- designates the amount of time before call routing of DID type 2 is executed.	PGM 182 + FLEX 12 + 05 Seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20

DCOB Attribute (PGM 186-187)

DCOB Attribute 1 (PGM 186)

DCO CO Type -- N/A see PGM 187 (Flex4)	PGM 186 + FLEX 1 + Value + [HOLD/SAVE]	VALUES -- (reserved)
Metering Type -- use call metering signal.	PGM 186 + FLEX 2 + 0 Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
R2 OUT Manage Timer -- in R2-DCO signaling, maximum wait time for forward signal from PX.	PGM 186 + FLEX 3 + 14 secs (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-50
R2 IN Manage Timer -- in R2 signaling, maximum time for waiting for forward signal from PX (1 sec).	PGM 186 + FLEX 4 + 14 secs (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-50
R2 Disappear Timer -- based on compelled signaling, it is a waiting timer until the R2 signal is stopped.	PGM 186 + FLEX 5 + 14 secs (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-50
R2 Pulse Timer -- in R2 signaling, time duration to send pulse typed R2 signal (20 msec).	PGM 186 + FLEX 6 + 07 Time (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-30 (20 msec base)
R2 Ready Timer -- in the case of an incoming call, after R2 Ready Timer expires, the seize ack signal is sent if a seize signal is received.	PGM 186 + FLEX 7 + 007 Time (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-500 (20 msec base)
Dial Tone Delay Timer -- *not used*	PGM 186 + FLEX 8 + 20 Time (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-30
Line Status -- based on the R2 specifications, this value is sent if a called destination is idle.	PGM 186 + FLEX 9 + 6 Value (1 digit)+ [HOLD/SAVE]	VALUES -- Range = 1-9
Calling Category -- based on the R2 specifications, this value is sent if a PX asks the calling category.	PGM 186 + FLEX 10 + 1 Value (1 digit) + [HOLD/SAVE]	VALUES -- Range = 1-9
ANI Request -- request the CID to the called party.	PGM 186 + FLEX 11 + 0 Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
CLI Digit Number -- *not used*	PGM 186 + FLEX 12 + 04 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-10

R2 OUT Digit Timer -- if outgoing dial is not performed within timer setting, the R2 outgoing call is failed.	PGM 186 + FLEX 13 + 05 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-50
R2 Error Prompt Usage -- if an R2 outgoing call is made and the ERROR signal is received (usually there's an error in the traffic etc.), the caller hears the error announcement to call again. If there's no available VMIB, the system error tone is heard.	PGM 186 + FLEX 14 + 0 Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
R2 Busy Prompt Usage -- if an R2 outgoing call is made and the BUSY signal is received (the destination is busy), the caller hears the busy announcement. If there's no available VMIB, the system busy tone is heard.	PGM 186 + FLEX 15 + 0 Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
R2 Announce Prompt Usage -- if an R2 outgoing call is made and the ANNOUNCE signal is received (if the destination number is invalid etc.), the caller hears the error announcement to call again. If there's no available VMIB, the system error tone is heard.	PGM 186 + FLEX 16 + 0 Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
DCO Gain -- this gain is used to generate R2MFC tone via voice path.	PGM 186 + FLEX 17 + 32 Value + [HOLD/SAVE]	VALUES -- 01-63

DCOB Attribute 2 (PGM 187)

Incoming Digit Type -- select the incoming digit information signaling type of DCO.	PGM 187 + FLEX 1 + CO Line Range + 2 (1 digit) + [HOLD/SAVE]	VALUES -- 0 = Pulse 1 = DTMF 2 = R2MFC
Outgoing Digit Type -- select the outgoing digit information signaling type of DCO.	PGM 187 + FLEX 2 + CO Line Range + 2 (1 digit) + [HOLD/SAVE]	VALUES -- 0 = Pulse 1 = DTMF 2 = R2MFC
No Of CLI Digits --	PGM 187 + FLEX 3 + CO Line Range + 10 Value (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-15

DCOB Type -- N/A Select the DCO CO line service type. According to the country, DCO CO service type is different.	PGM 187 + FLEX 4 + 2 Value (1 digit) + [HOLD/SAVE]	0 = Cyprus 1 = Italy 2 = Korea
Send S-Block Command -- if value is set to ON, the DCO line send S-Block command to PX.	PGM 187 + FLEX 5 + 0 Value (1 digit) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

ISDN System Base Program

System ISDN Attributes (PGM 200)

Advice of Charge -- N/A The AOC is the call cost information service that is provided by public ISDN. According to the country, the standard of AOC type is different. This value is used to set the AOC type.	PGM 200 + FLEX 1 + VALUE + [HOLD/SAVE]	VALUES -- 0-6
CO ATD Code -- used when ISDN DID call incoming and outgoing case. If the received DID digit is matched this value, then the call is routed to attendant station. If PGM 114 - FLEX 5 is set to CO ATD, and the station is making an outgoing CO call, then this value is used as the outgoing station's CLI data.	PGM 200 + FLEX 2 + Value + [HOLD/SAVE]	VALUES -- max 2 digits
Reserved	PGM 200 + FLEX 3	*Reserved*
Reserved	PGM 200 + FLEX 4	*Reserved*
Reserved	PGM 200 + FLEX 5	*Reserved*
CLI Print -- N/A This value is used to execute the CLI print about the incoming CO call. If this value is set to ON, the CLI of the incoming CO call will be sent to serial/MODEM/LAN port.	PGM 200 + FLEX 6 + Value + [HOLD/SAVE]	VALUES --
International Access Code -- N/A This value is used to modify the received CLI of the international incoming CO call. If this value is set, and if station receives the international incoming CO call, then this value is inserted in front of the CLI.	PGM 200 + FLEX 7 + Value + [HOLD/SAVE]	VALUES --
Reserved	PGM 200 + FLEX 8	*Reserved*

Maintain DID Name -- N/A This value is used at the CLI display of an incoming DID CO call. If the incoming DID call has CLI, it is displayed on the station LCD only during ringing time. If this value is set to ON, CLI display is maintained when the call is answered.	PGM 200 + FLEX 11 + Value + [HOLD/SAVE]	VALUES --
PC Application Destination Station -- N/A This value is used the valid destination station about PC application connection request.	PGM 200 + FLEX 12 + Value + [HOLD/SAVE]	VALUES --

Tables

Mobile Extension (PGM 236)

Enter bin number which matches with station physical number and follow the specific procedure as listed in the Table:

Assign CO Group -- used to assign the CO group when a call routes to a mobile extension.	PGM 236 + FLEX 2 + CO Group + [HOLD/SAVE]	VALUES -- group number
Assign Telephone Number -- used to enter the telephone number of a mobile extension when this feature is activated.	PGM 236 + FLEX 3 + Mobile Number (up to 24 digits) + [HOLD/SAVE]	VALUES -- telephone number
Assign CLI Number -- used to enter the CLI number of a mobile extension	PGM 236 + FLEX 4 + CLI number (up to 16 digits) + [HOLD/SAVE]	VALUES -- CLI number
Voice Message Notification to Mobile (future feature) --	PGM 236 + FLEX 6 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Usage -- if feature is set to ON and if there is a voice message left for the station, the system sends SMS notification to its Mobile Extension. (Only possible when PSTN SMS is supported -- *SMS is not supported at this time*.	PGM 236 + FLEX 7 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Nation Specific (PGM 401-424)

PGM	FLEX	FEATURE	RANGE	DEFAULT
401	-	SLIB RX Gain	-	-
-	1	SLIB/DKT	00-63	32
-	2	SLIB/SLT	00-63	32
-	3	-	-	-
-	4	-	-	-
-	5	SLIB/ACOB	00-63	32
-	6	-	-	-
-	7	SLIB/DCOB	00-63	44
-	8	SLIB/VMIB	00-63	40
-	9	SLIB/DTMF	00-63	28
-	10	SLIB/TONE	00-63	28
-	11	SLIB/MUSIC 1	00-63	40
-	12	SLIB/MUSIC 2	00-63	40
-	13	-	-	-
404	-	ACOB RX Gain	-	-
-	1	ACOB/DKT	00-63	35
-	2	ACOB/SLT	00-63	32
-	3	DTI-SPK	00-63	-
-	4	-	-	-
-	5	ACOB/ACOB	00-63	26
-	6	-	-	-
-	7	ACOB/DCOB	00-63	38
-	8	ACOB/VMIB	00-63	37
-	9	ACOB/DTMF	00-63	36
-	10	ACOB/TONE	00-63	37
-	11	ACOB/MUSIC 1	00-63	37
-	12	ACOB/MUSIC 2	00-63	37
-	13	-	-	-
-	14	ACOB/MODEM	00-63	37

PGM	FLEX	FEATURE	RANGE	DEFAULT
406	-	DCOB RX Gain	-	-
-	1	DCOB/DKT	00-63	26
-	2	DCOB/SLT	00-63	26
-	3	-	-	-
-	4	-	-	-
-	5	DCOB/ACOB	00-63	15
-	6	-	-	-
-	7	DCOB/DCOB	00-63	32
-	8	DCOB/VMIB	00-63	32
-	9	DCOB/DTMF	00-63	32
-	10	DCOB/TONE	00-63	32
-	11	DCOB/MUSIC 1	00-63	32
-	12	DCOB/MUSIC 2	00-63	32
-	13	-	-	-
-	14	DCOB/MODEM	00-63	37
407	-	VMIB RX Gain	-	-
-	1	VMIB/DTIB	00-63	21
-	2	VMIB/SLIB	00-63	21
-	3	-	-	-
-	4	-	-	-
-	5	VMIB/ACOB	00-63	23
-	6	-	-	-
-	7	VMIB/DCOB	00-63	32
-	8	VMIB/MUSIC 1	00-63	32
-	9	VMIB/MUSIC 2	00-63	32
408	-	DTMF RC Gain	-	-
-	1	DTMF/SLIB	00-63	32
-	2	-	-	-
-	3	DTMF/ACO	00-63	32
-	4	-	-	-
-	5	DTMF RC/DCOB	00-63	32

PGM	FLEX	FEATURE	RANGE	DEFAULT
409	-	EXT PAGE Gain	-	-
-	1	EXT PAGE/DKT	00-63	26
-	2	EXT PAGE/SLT	00-63	26
-	3	-	-	-
-	4	-	-	-
-	5	EXT PAGE/ACOB	00-63	28
-	6	-	-	-
-	7	EXT PAGE/DCOB	00-63	37
-	8	EXT PAGE/VMIB	00-63	37
-	9	EXT PAGE/MUSIC 1	00-63	37
-	10	EXT PAGE/MUSIC 2	00-63	37
-	11	-	-	-
410	-	CPT Gain	-	-
-	1	CPT/ACOB	00-63	32
-	2	-	-	-
-	3	CPT/DCOB	00-63	32
411	-	MODEM Gain	-	-
-	1	MODEM/ACOB	00-63	20
-	2	-	-	-
-	3	MODEM/DCOB	00-63	24
412	-	Short SLIB Gain (SAF only)	-	-
-	1	Short ACO	00-63	32
-	2	Long ACO	00-63	32
413	-	Long SLIB Gain (SAF only)	-	-
-	1	Short ACO	00-63	32
-	2	Long ACO	00-63	32
414	-	Far SLIB Gain (SAF only)	-	-
-	1	Short ACO	00-63	32
-	2	Long ACO	00-63	32
415	-	Short ACO Gain (SAF only)	-	-
-	1	Short SLIB	00-63	32

PGM	FLEX	FEATURE	RANGE	DEFAULT
-	2	Long SLIB	00-63	32
-	3	Far SLIB	00-63	32
-	4	DTIB	00-63	26
416	-	Long ACO Gain (SAF only)	-	-
-	1	Short SLIB	00-63	32
-	2	Long SLIB	00-63	32
-	3	Far SLIB	00-63	32
-	4	DTIB	00-63	32
417	-	MBU DSP RX Gain	-	-
-	1	<- ACO SMS (n/a)	00-63	24
-	2	<- DCO SMS (n/a)	00-63	38
-	3	<- SLT SMS (n/a)	00-63	17
-	4	<- ACO DTMF CID	00-63	38
-	5	<- ACO FSK CID	00-63	38
-	6	<- ACO R CID	00-63	38
418	-	MBU FSK TX Gain	-	-
-	1	> ACO SMS (n/a)	00-63	32
-	2	-> DCO SMS (n/a)	00-63	38
-	3	-> SLT SMS (n/a)	00-63	32
-	4	-> ACO FSK CID	00-63	32
420	-	System Tone Frequency	-	-
-	1	Dial Tone	4 digits	0350 Hz, 0425 Hz
-	2	Ring Back Tone	4 digits	0440 Hz, 0425 Hz
-	3	Busy Tone	4 digits	0480 Hz, 0620 Hz
-	4	Error Tone	4 digits	0480 Hz, 0620 Hz
-	5	Dummy Dial Tone	4 digits	0350 Hz, 0440 Hz
421	-	Differential Ring Frequency	-	-
-	1	Ring 1	4 digits	1000 Hz, 1020 Hz
-	2	Ring 2	4 digits	0890 Hz, 0910 Hz
-	3	Ring 3	4 digits	1260 Hz, 1280 Hz
-	4	Ring 4	4 digits	0800 Hz, 0820 Hz

PGM	FLEX	FEATURE	RANGE	DEFAULT
422	-	Distinct Ring Frequency	20 msec base	-
-	1	Ring 1	4 digits	0480 Hz, 0000 Hz
-	2	Ring 2	4 digits	0400 Hz, 0000 Hz
-	3	Ring 3	4 digits	0620 Hz, 0000 Hz
-	4	Ring 4	4 digits	0770 Hz, 0000 Hz
423	-	ACNR	-	-
-	-	1: Ring-Back Tone	0-255	100, 200
-	-	2: Busy Tone	0-255	025, 025
-	-	3: Error Tone	0-255	012, 012
-	-	4: S-Dial Tone	0-255	150, 000
424	-	DTIB ACO RX Gain (SAF only)	n/a	n/a
-	1	Short ACO	00-63	37
-	2	Long ACO	00-63	42

Initialization (PGM 450)

PGM	FLEX	FEATURE	ASSOCIATED WITH …
450	-	Initialization	-
	1	Flexible Numbering Plan Initialization	PGM 105 - PGM 107
	2	Station Database Initialization (*enter station range*)	PGM 110 - PGM 114, PGM 116 - PGM 119, PGM 121 - PGM 124, PGM 179
	3	CO Line Database Initialization (*enter CO numbers*)	PGM 140 - PGM 144
	4	System Feature Database Initialization	PGM 108, PGM 160 - PGM 177
	5	Station Group Database Initialization	PGM 190, PGM 191
	6	ISDN Tables Database Initialization	PGM 201, PGM 202, PGM 230, PGM 231
	7	*Reserved*	None (*Reserved*)
	8	System Timer Database Initialization	PGM 180 - PGM 182
	9	Toll Table Database Initialization	PGM 224, PGM 225
	10	LCR Database Initialization	PGM 220 - PGM 222
	11	Other Tables Initialization	PGM 227 - PGM 229, PGM 232 - PGM 237
	12	Flexible Button Program Initialization	PGM 115
	13	Networking Database Initialization	PGM 320 - PGM 324
	14	All Database Initialization	All of the Above
	15	System Reset By Software	-
	16	DID Reroute Table	Reroute DEST of PGM 231
	17	Board Data	PGM 155, PGM 340, PGM 341

Print Prot Database (PGM 451)

PGM	FLEX	FEATURE	RANGE
451	-	Print Prot Data	-
	1	Flexible Numbering Plan Print	-
	2	Station Database Print	STN_R
	3	CO Line Database Print	CO_R
	4	System Feature Database Print	-
	5	Station Group Database Print	-
	6	ISDN Tables Database Print	-
	7	System Timer Database Print	-
	8	Toll Table Database Print	-
	9	LCR Database Print	-
	10	Other Tables Print	-
	11	Nation Specific Database Print	-
	12	Flexible Button Program Print	STN_R
	13	All Database Print	-
	14	Networking Database Print	-
	15	Quit Print	-

Internet Protocol (H.450)

The SBX networking system can link telephone systems together so that they behave like a unified, singular communication network: providing service transparency, cost-efficiency, and adaptability to an organization's needs.

Networking Basics

Network Configurations

The system can support various interconnected corporate network configurations via the Internet and up to 72 systems (including itself) can be combined on the network.

Networking Protocols

For the basic networking functions and proprietary protocol for advanced networking functions, the system can support H.450 over IP.

- IP standard protocol H.323 for call control, H.450.1 - H.450.12
- LG-NORTEL CO. LTD. Proprietary protocol for advanced function

Requirements

Software lock key (license) installation is required for use of the networking features. Each SBX IP 320 system has its own unique software lock-button.

NOTE: To get the software lock-button, contact your SBX IP 320 system distributor or dealer.

Numbering Plan (Unified Dialing Plan)

The SBX IP 320 networking system utilizes Unified Dialing Plan (UDP). This plan allows each station in the system to have a unique station number from 2 digits up to 7 digits. The unique station number is assigned according to the numbering plan of each SBX IP 320 system.

Automatic Routing Service

A dialed number is analyzed and routed to access the correct destination according to the Network Numbering Table. This allows the system to supports an alternative route if the main path fails.

Display Messages (Absent Text Message)

This feature is available within the networking connection environment - see "Custom Display Text Message (Absent Text Messages)" on page 1-70.

This means that if a station user enables the Absent Text Message feature at his/her station, an incoming call to this station (even one from another networking system) will receive the designated text message (displayed on the calling station LCD).

CONDITIONS

- A text message will be displayed on the LCD of the networked calling station, while the called station receives the ring signal.

OPERATION / SETUP

Operation of the feature is automatic when a call is received from a station within, or from, another networked system.

Attendant Call Service (CAS)

An Attendant call from a station on a networked system can be routed to the Centralized Attendant (CA) of the Call Attendant Service (CAS) master system. This call will be queued if all centralized Attendants are busy.

CONDITIONS

- Intercom calls are routed to network Attendant if system Attendant is in ATD_DND mode.
- CO calls can be routed to network Attendant only if the DID/DISA destination is designated as ATD, and the ring is not assigned to a station.

ADMIN PROGRAMMING

Enable/Disable Networking CAS

Use PGM 320 … see page A-22.

Assign Flex Button/Station Programming Button

Use PGM 115 … see page 1-55.

Set Attendant Assignment

Use PGM 164 … *see* page 1-6.

Set DID/DISA Destination

Use PGM 167 … see page 1-126.

Set CO Ring Assignment

Use PGM 144 … see page 1-13.

OPERATION / SETUP

To route a call to the network Attendant - as a System Attendant

1. Assign Network DSS to any Attendant (other than the System Attendant).
2. Press [ATD DND].
3. Dial the Attendant code from any station in the system.

The call is routed to the network Attendant, ring back tone sounds at the calling station, and the [NET DSS] LED lights.

Busy Lamp Field (BLF)

A station on a networked system can be used to program the appearance of a Busy Lamp Field (BLF) status on other stations. The BLF button can be used to make a network call to another networked station.

CONDITIONS

- The BLF manager software:
  - can be installed on one system for use throughout the whole networked system.
  - periodically receives station status information from whole system. It also sends a broadcast message to the whole system when the status changes.

    NOTE: The UDP port is used to send status information. The TCP port will be used to send other information.

    If the BLF manager does not exist, BLF services can only be activated between two systems.

    HINT: For more information about the BLF Manager Software, please refer to Chapter 6 of the SBX IP 320 Installation Guide.
- The number of network DSS stations is restricted according to the capability of each system.
- When a flex button on a station is assigned as a NET DSS button for another station, the system serves as local BLF to indicate the status of the station.
- CO BLF is not supported. In addition, the ringing signal does not update the status of that Station - ICM / CO / Transfer / CO Recall ring.
- When a station is in DND mode, the [NET DSS] LED flashes.

IMPORTANT: The address of the BLF Manager should be registered on each system.

ADMIN PROGRAMMING

Set Networking Supplementary Attributes

Use PGM 321 … see page A-23.

Assign TCP Port

Use PGM 321, then FLEX 2 … see page A-23.

Assign UDP Port

Use PGM 321, then FLEX 3 … see page A-23.

Assign BLF Manager IP Address

Use PGM 321, then FLEX 4 … see page A-23.

Set Duration of BLF Status

Use PGM 321, then FLEX 5 … see page A-23.

Call Completion

Call Completion is the same as CallBack (see page 1-66), except that it is conducted within a networking connection environment, and is used at H.450 protocol standard specification.

There are two types of call completion:

- Completion of Calls to Busy Subscribers (CCBS) - When calling a busy station (busy tone sounds after dialing) within another system, the caller can be notified when that busy station becomes idle. Upon this notification to the caller, the call can be re-dialed.
- Completion of Calls on No Reply (CCNR) - After calling a station within another system and getting no answer, the caller can be notified when the target station user becomes available. Upon this notification to the caller, the call can be re-dialed.

CONDITIONS

- A new Call Back request left at a station will cancel any previous callback messages.
- A voice message cannot be left even when VMIB is installed in a local system.
- When the caller does not answer the call back ring within the set network timer, the call will be dropped.
- There are two CCBS modes-Connection Mode and Disconnection Mode - see Admin Programming.

ADMIN PROGRAMMING

Set CCBS modes-Connection Mode and Disconnection Mode

Use PGM 320 … see page A-23.

OPERATION / SETUP

To use CCBS

1. Dial a busy station another networking system.
2. Press [CALLBK].
   A confirmation tone sounds, and the call will be disconnected.
   When the busy called station returns to Idle, the caller receives a call-back ring.
3. Answer the call-back ring to automatically redial the station that was busy.

Call Offer

Call Offer is the same as Camp-On (see page 1-39), except that the Call Offer is used in a networking connection environment at the H.450 protocol standard specification.

When call to a busy station (located on another networking system) is dialed, the caller can enable the Call Offer feature. Call Offer sends a tone to the busy station (through the receiver or on speaker), and the [HOLD/SAVE] LED flashes to let the station user know that a call is waiting.

CONDITIONS

- Call Offer
  - can only be applied to a station that is in talk status.
  - cannot be used during a conference or page.
- The SBX IP 320 System does not support the path reservation mode of a standard QSIG specification.

ADMIN PROGRAMMING

Set Networking Basic Attribute

Use PGM 320 … see page A-22.

OPERATION / SETUP

To set Call Offer

1. Dial a busy station another networking system.
2. Press * (the Camp-On code), then wait for the busy station to respond.

The busy station receives an off-hook muted ring and the [HOLD/SAVE] LED flashes, while the Calling station receives a ring-back tone instead of a busy-tone.

To answer a Call Offer

When the off-hook muted ring sounds, press the flashing CO line button.

The muted ring is changed to normal CO ring when the user goes on-hook to take the call.

Centralized SMDR for Network (Transit) Calls

The Station Message Detail Recording (SMDR) utility will provide details on both incoming and outgoing

CONDITIONS

- The SMDR call reports from the master system include the station number from the networked systems (NET-Number) on CO Transit-In and CO Transit-Out calls.
- The NET-Number are automatically included in the Centralized SMDR output for CO Transit-In and CO Transit-Out calls.
- Up to 4 digits can be displayed in the station column.
- SMDR reports only applies to ISDN CO lines on the Master system.

EXAMPLE: Below is an example of an SMDR Printout from the master system:

Lines 0026 & 0027 show results for a CO Transit-Out call from Station 200 on the networked system. ISDN Line 001 and VOIP Line 011 were used between systems.

```
NO  STA  CO TIME   START       DIALED
----- ---- --- ------ ----------------- ----------------------
0001EXT031 00:00:10 24/07/08 11:55 R RING 00:05
Normal incoming call is received at an assigned stations of CO 031 during 5 sec.
0002 10100300:01:20 25/07/08 16:23 R RNG 00:09
DID call is disconnected during it being forwarded to ATD STA 101, because the dialed station
does not exist.
0003100001 00:00:20 25/07/08 18:11 R100 RING 00:04
DID call is received at STA 100 during 4sec and disconnected.
0004  102002 00:01:20 26/07/08 18:37 R103 RING 00:04
DID call is received at STA 102 via unconditional call forward to STA 103 during 4 sec and
disconnected.
0005  621008 00:00:20 26/07/08 13:02 G620 RING 00:06
DID call is received at Ring Group 621 during 6sec and disconnected.
0006  100001D 00:00:04 06/07/08 16:04 H100 RING 00:02
DID call is disconnected while STA 100 is being held it.
0007  10200100:00:07 06/07/08 17:04 H100 RING 00:02
DID call is disconnected while it is being transferred from STA 100 to STA 102.
```

Lines 0028 & 0029 show results for an incoming CO Transit-In call to Station 200 on the networked systems. ISDN Line 006 was used for the incoming call and VOIP Line 011 was used between systems. The NET-Number (200) is displayed as the Outgoing Number from the master system to the networked systems.

Centralized Voice Mail System (VMS)

An external Voice mail system can be used within a networked SBX IP 320 system.

CONDITIONS

- When a centralized VMS is assigned in a networked system, the number of the centralized VMS should be the same as the representative number of mail access created in the master system.
- The Numbering Plan (including the representative number of mail access assigned in master system) should be included in the Numbering Plan of QSIG group in networked system.

ADMIN PROGRAMMING

Set the Network Destination MBU IP

Use PGM 324 … see page A-25

Assign Station Group - Centralized VMS Assignment

Use PGM 190 … see page 1-100.

CO Ring Assignment

A user can assign a CO Ring to one of the networked stations.

CONDITIONS

- This feature is based on the network feature.
- Only one Network-station can be assigned by Network-Destination (see Admin Programming).
- Network-station type (4) must be assigned to a Network-station number.
- Incoming calls to the CO line specified will be routed to the assigned network user.
- Additional call handling rules are as follows:
  - if the ring assignment is set to Network-station, the system will search for an idle network CO line.
  - if the network CO line is idle, the incoming call will be connected to the assigned Network-Destination-station.
  - if the network CO line is busy, the call will be routed to the Error-Destination specified (see Admin Programming).

ADMIN PROGRAMMING

Add a Network Station for Assign Destination

Use PGM 144 … see page 1-13.

Set Error Destination

Use PGM167, then FLEX 2 … see page 1-126.

CO Transit - In

This feature automatically re-routes incoming DID/MSN calls from another networked system.

CONDITIONS

- When an outside caller makes a DID call to Station 202, and the DID call request arrives at the master system, the networking system of Station 202 is not connected to the PSTN directly. However, it can be connected to the PSTN through another networked system (master system).
- When a call comes in, the master system checks the received DID call destination. If the DID destination matches a station within the system, the DID call is routed to the station. However, if there is no match to the DID destination, the master system searches the network numbering plan table for possible matches in another networked system. If a match is found in another networked system, the master system transfers the received DID call request to the appropriate network networking system.
- When the CO Transit-In DID call rings a Station 202, the caller is then connected when Station 202 answers.
- There are no timers affiliated with CO Transit-In operation.
- A busy tone sounds to the caller if a networking path is not available during transit.
- When an incoming call is received from the PABX, the call is automatically routed, and a network CO line is secured according to the DID conversion.
- Incoming calls ring with CLI at the dialed station, and a ring-back tone sounds to the caller.

ADMIN PROGRAMMING

Access the Networking Routing Table - Numbering Plan

Use PGM 324 … see page A-24.

Set the DID Conversion Type

Use PGM 143. … see page 1-125

Access the Flexible DID Table - Assign Slave Extension

Use PGM 231 … see page 1-127.

CO Transit - Out

The CO Transit-Out increases efficiency of CO lines, and reduces call costs by routing outgoing CO calls to the nearest appropriate point within a networked system.

CONDITIONS

IMPORTANT: The system requires sufficient digit translation and string analysis options to enable the switch to route the call correctly.

- To use CO Transit-Out, the networked system user must dial the CO transit-out code; the CO Transit-Out service is not activated by pressing a CO Line button.
- Station 202 of the slave system dials the CO Transit-Out code, that is registered in the network numbering plan table. The CO Transit-Out code allows a station from the slave system to seize the PSTN CO line of the master system.
- The slave system seizes a CO line that is preprogrammed for transmitting the CO Transit-Out code to the master system. The dialed code is transmitted to the master system.
- The master system uses the CO Transit-Out code to seize a CO line that is preprogrammed to serve the request. After seizing the PSTN CO line, the master system sends the digit information to the PSTN that is dialed from the station of the slave system.
- Calls are only connected when the called party answers.
- Toll restrictions can be applied to the station COS of the networked system.
- On the master system, the Attendant must have CO access authority to make a public connection.
- For CO Transit-Out, any code from the NET Routing Table can be used (see Admin Programming).

  NOTE: If there is a conflict between NET Routing Table and the System Numbering Plan, the System Numbering Plan will have the highest priority.
- If the CO Transit-Out code is programmed into the network Numbering Plan Table, then the Type value of this entry must be set to PSTN (see Admin Programming).
- If the networked system isn't directly connected to the master system, the CO Transit-Out code can be transparently transmitted through the other networked systems setting the network Routing Table - Numbering Plan (see Admin Programming).
- At the master system, the PSTN CO lines must be set (see Admin Programming).

ADMIN PROGRAMMING

Set PSTN CO Lines

Use PGM 322 … see page A-24.

Set Networking CO Line Type

Use PGM 322, then FLEX 4 … see page A-24.

Access Network Routing Table - Numbering Plan

Use PGM 324 … see page A-24.

OPERATION / SETUP

When a CO Transit-Out is Activated

1. When a CO Transit-Out code is entered for a station on another networked system, the networked system secures a CO line that is preprogrammed for transmitting the CO Transit-Out codes to the master system.
2. The master system secures a CO line that is preprogrammed to receive the CO Transit-Out codes.
3. After seizing a PSTN CO line, the master system sends the digit information which places a call.
4. The called station rings, and the call is connected when it is answered.

Do-Not-Disturb (DND) with Network Calls

Do Not Disturb (DND) prevents network calls from ringing at the designated station (also see page 1-49 for more information about DND).

CONDITIONS

- If the BLF feature (see page A-3) has been activated on the station using DND, the [NET DSS] LED flashes when DND is enabled.

ADMIN PROGRAMMING

Set DND Attribute

Use PGM 111 … see page 1-49.

OPERATION / SETUP

To activate DND mode:

1. Press [DND] at the station.
2. When a call is received at the station, the Caller will hear a busy tone; the station in DND mode will not receive any notification of the call.

Identification Service

Between networking systems, a station name can be transmitted to (and displayed on) destination stations via the Identification Service feature.

There are two types of Identification Services available:

- Calling Name Identification Presentation (CNIP) - the name of a station is transmitted to/displayed on the destination when an outgoing call to a station in another network is made.
- Connected Name Identification Presentation (CONP) - the name of a destination station in another network is transmitted to/displayed on the calling station when an incoming call is answered.

EXAMPLE: If Station 4150 in Quebec, calls Station 1245 (that is networked to the Quebec location via SBX IP 320) in Texas, each station can see the station name of the other if the Identification Service is set up to allow for the transmission of the information.

ADMIN PROGRAMMING

Enable Networking CNIP and CONP Enable

Use PGM 320 … see page A-22.

OPERATION / SETUP

CNIP and CONP operation is executed whenever the station of networking system makes a call and it answers the incoming call.

Also see page 1-81 for information about Programming a Station Name.

Network Message Waiting Indicator (MWI)

A station can leave a MWI message when a station in another networked system does not answer. The MWI LED flashes on the called station to signify that a message has been left.

CONDITIONS

- The MWI feature is available on stations with a display.
- When the System makes a Call Back according to MWI data, the CO line is automatically selected within the network CO group.
- The Message Waiting Indication (MWI) is the same service as the CLI Message Wait feature (see page 1-141).
- Also see:
  - "Message Wait and Call Back" on page 1-66.
  - "Message Wait Indicator LEDs" on page 1-67.
  - "Message Wait Indicator (MWI) - SLT Feature" on page 1-70.

ADMIN PROGRAMMING

Enable CLI Message Wait

Use PGM 114 … see page 1-139.

Set Networking Basic Attribute

Use PGM 320 … see page A-22.

Set Networking CO Line Attribute

Use PGM 322 … see page A-24.

Access Networking Routing Table - Numbering Plan

Use PGM 324 … see page A-24.

OPERATION / SETUP

To Retrieve/Delete MWI messages:

1. When the MWI LED is flashing, press [CALLBK].
   The caller's CLI number, date and time the message was left, as well as the number of calls from the same CLI (call count) are displayed.
2. Use the volume up/down button to display the previous/next MWI information.
   -and/or-
   Press [CONF] to delete the current message and display the next message, if applicable.
   A confirmation tone sounds.

To place a Call Back from a MWI:

Once you retrieve a message using the steps shown above, press [HOLD/SAVE].

The system uses the MWI data to return a call back to the station that left the message.

Network Call (Net Call)

This feature allows a user to make a call to a station in another networked system by dialing a station number in the same way that an intercom call is placed to a station within the same system. In addition, all telephony features available for intercom calls (such as e.g., call transfer, hold, conference) are available for Net Calls.

CONDITIONS

- To make a Network Call, the caller dials the destination station number without first having to access a CO line.
- When a caller makes a Network Call, the system automatically accesses an idle CO line to send the Network Call request to the destination station. If there is no available idle CO line, the user hears an error tone.
- A received Network Call rings in the Terminal Answer Mode, regardless of the Intercom answer mode setting (Hands-free/Terminal/Privacy).
- When the system detects a fatal error from the network, the system will send the digit stream to the network using the alternate speed dial bin. In this case, the Call is not a networking Call.
- The Network Call is also applied to the CO Call Restriction Timer (PGM 180 - FLEX 17).

ADMIN PROGRAMMING

Set Networking Basic Attributes

Use PGM 320 … see page A-22.

Set Networking CO Line Attributes

Use PGM 322 … see page A-24.

Access Networking Routing Table - Numbering Plan

Use PGM 324 … see page A-24.

OPERATION / SETUP

To make a Net Call:

Lift the handset or press [SPEAKER], then dial the station number on another networked system.

-or-

Press [NET DSS], if available. The station uses the Network Routing table to automatically accesses a network CO Line and send a digit stream to the networked system.

The called system receives the digit stream sent by the calling system, and uses the Network Routing Table to analyze the stream to determine the right destination station.

Network (Net) Call Forward

A station user can forward Network Calls over the network to any networked station, hunt Group, or VMIB in the System.

CONDITIONS

- There are two kinds of standard Net Call Forward signaling methods in the H.450 protocol specification: Join and Rerouting. The main difference is how the connecting path is controlled among the forwarding, forwarded, and forward-target stations
- There are several types of Network Call Forwarding:
  - Unconditional - forwards calls to another destination no matter what the status of the called station is (for example, on or off hook, busy, DND, no answer, etc.).
  - Busy - forwards calls when the called station is busy (off hook/DND)
  - No Answer - forwards calls when there is no answer at the called station.
  - Busy/No Answer - forwards calls when the called station is busy (off hook/DND) or when there is no answer.
  - Follow-me - Forward - specify an extension to which you want all your calls automatically forwarded.
- When Call Forward is enabled, the [DND/FWD] LED flashes on the forwarding station.
- The forwarding system does not check the status of the Forwarded-to station (DND, Call Forward, or no setting) when Network Call Forward is enabled.
- Only one Call Forwarding type can be set at one time.

OPERATION / SETUP

To activate Network Call Forward

1. Press [SPEAKER], then [DND/FWD].
2. Press one of the following to select the corresponding call forward type:
   1 = unconditional.
   2 = busy
   3 = no answer
   4 = busy/no answer
3. Enter the number of the "forward to" station on another networked system.
   The [DND/FWD] flashes, and a confirmation tone sounds.

Network Follow-Me Forward

A User from one system can activate a Follow-Me-Forward from a station on another system within the network. Once activated, all calls to the Forwarded station will be forwarded to the designated station over the network. The forward can only be cancelled from the Forwarded station.

CONDITIONS

- An Authorization code must be registered to use Follow-Me Call Forward.
- Remote deactivation is not supported.
- The confirmation tone will be provided even though Follow-Me Forward may not be allowed by the other system.
- Network Follow-Me Forward is available within a VoIP networking environment only.
- Among networked systems, the same Authorization code mode (5 Digit /Variable Authorization code Usage) should be programmed.

ADMIN PROGRAMMING

Set Call Forward Attribute

Use PGM 111 … see page 1-182.

Access the Authorization Code Table

Use PGM 227 … see page 1-20

Set Networking Basic Attribute

Use PGM 320 … see page A-22.

Set Networking Supplementary Attributes - Transfer Mode

Use PGM 321 … see page A-23.

Set Networking CO Line Attribute

Use PGM 322 … see page A-24.

Access Networking Routing Table - Numbering Plan

Use PGM 324 … see page A-24.

OPERATION / SETUP

To activate Network Call Forward- Follow-Me

1. From the station that the calls will be forwarded to, press [SPEAKER] + [DND/FWD].
2. Dial the Follow-Me-Forward code (0) + the station number that is to be Call-Forwarded from another system.
3. Dial the Authorization Code + the # button; the [DND/FWD] will flash at the Forwarding station and a confirmation tone will be provided.
4. All calls to the Forwarding station will be routed to the Forwarded station.

To deactivate Network Call Forward - Follow-Me

At the User's own station, press the flashing [DND/FWD].

The [DND/FWD] will extinguish, and the Network Call Forward-Follow Me will be cancelled.

Network Conference

Network Conference is generally the same as the regular Conference feature (see page 1-89), with the additional specification that a networked station can be assigned as a conference member.

A call to a station on one node is able to conference in a party on any other networked node. Up to 3 stations of the network can be members of a conference.

CONDITIONS

- An IP phone cannot be the master station in the Network Conference.
- If an IP phone sends a Network Conference Invite Setup message to a Non-IP phone, the message will be rejected.
- When a Non-IP phone sends a Network Conference invite to an IP phone, the IP phone receives the normal Setup message in stead of the Invite Setup message.
- Also see "Multi-line Conferences" on page 1-89.

ADMIN PROGRAMMING

Set Networking Basic Attribute

Use PGM 320 … see page A-22.

Access Networking Routing Table - Numbering Plan

Use PGM 324 … see page A-24.

Network Firewall Routing

SBX IP 320 supports networking of systems that are utilizing a static/1-to-1 NAT translation.

CONDITIONS

- This feature can be programmed with each Net Numbering Plan table.
- The VOIBE must be version 2.1Ck or later.
- If the networked systems use:
  - the same network, then Firewall Routing should be disabled. When this is the case, the Local IP address is used by networking feature.
  - different networks, then Firewall Routing should be enabled. When this is the case, the Firewall IP address is used by the networking feature.

ADMIN PROGRAMMING

Set Firewall Routing

Use PGM 324, FLEX 9 … see page A-25.

Network (Net) Transfer

The Net Transfer is the same as transferring a call (screened or unscreened) within the same system (see "Call Transfer" on page 1-184).

CONDITIONS

- There are two Net Transfer signaling methods:
  - Join - an additional connecting path is needed to transfer the call to another station.
  - Routing - the old connecting path of transferring station will be cleared, therefore a new connecting path is used to transfer the call.

  If both transfer signalling methods are supported by the system, the appropriate mode can be set in Admin Programming).
- If both transferred stations and target stations exist within the same system, the networking CO line used for the transferring voice path is not needed (that is, the transfer call is processed as an intercom call).
- After the transferred is made, and the transferring station disconnects, the transferred call doesn't recall to the transferring station.
- If a Net Transfer is attempted when all CO lines are in use, an error tone sounds.
- If a call is transferred to a busy station, a busy tone sounds.

ADMIN PROGRAMMING

Set Networking Basic Attributes

Use PGM 320 … see page A-22.

Set Networking Supplementary Attributes - Transfer Mode

Use PGM 321 … see page A-23.

Set Networking CO Line Attributes

Use PGM 322 … see page A-24.

Access Networking Routing Table - Numbering Plan

Use PGM 324 … see page A-24.

OPERATION / SETUP

See "Call Transfer" on page 1-184.

Security of Transit-Out Code with registered IP

If Transit-out Security feature is enabled, the received IP (in all received setup packets for the Transit-Out feature (see page A-9) is checked with the registered IP. If the IP is verified, the Transit-Out feature is initiated. However, if the IP is not validated, the call is automatically disconnected.

CONDITIONS

- Once Transit-Out Security, IP numbers must be set at CPN Info in Network Number Table (see Admin Programming).
- The verification that occurs with Transit-out Security is a comparison between the received IP in setup packet and registered IP. The system compares the received IP number with all registered CPN Info IP at the NET Number table. Transit-Out Security is only used on a VOIP CO line; the setup packet for Transit-Out arrives from a VOIP line.
- If a received IP does not match with any registered IP in the Network Number Table, the call is disconnected.

ADMIN PROGRAMMING

Access NET Number Table

Use PGM324 … see page A-24.

Enable Transit-Out Security

Transit-Out Security -- if transit-out security option is set, the system searches for registered IP in the Net Number tables. If received IP does not match any registered IP in the Net Number Table, this call will be disconnected.	PGM 161 + FLEX 23 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

VOIP Networking

Two SBX IP 320 Systems can be connected through the VOIB. The networking CO line connects the networking systems, and is used for both the network signaling message and voice path.

CONDITIONS

- To use the networking CO line, the service type must be set to DID/MSN (see Admin Programming).
- To receive the net call digit information correctly, the appropriate DID conversion type must be set.
- Information for up to four VOIP CPNs can be entered. The reason for multiple VOIP CPNs is to assign a different IP address for each VOIB (that is when the destination networking system utilizes multiple VOIBs).
- The networking feature must be enabled on each system (see Admin Programming below). However, if the networking lock-button is not installed, this feature cannot be enabled.
- To satisfy the UDP condition, the Flexible Station Numbering Plan must be programmed on each system. The station number ranges are 100 to 199 for System A, and 200 to 299 for System B (see Admin Programming).

IMPORTANT: Any changes to station numbers must not conflict with the flexible numbering plan code on each system. For example, if System A uses 2 as its Pick-Up code in its flexible numbering plan, then station numbers in that system cannot begin with the digit 2.

ADMIN PROGRAMMING

Set CO Service Type (to ISDN DID)

Use PGM 140 … see page 1-135.

Set ISDN CO Line Attributes - DID Conversion Type

Use PGM 143 … see page 1-125.

Enable DID Receive Digit and DID Digit Mask

Use PGM 146 … see page 1-121.

Access Flexible DID Table

Use PGM 231 … see page 1-127.

Access Flexible Station Numbering Plan

Use PGM 105 … see the *SBX IP Installation Guide*.

Set Network CO Group and Type (to 01 and NET)

Use PGM 322, then FLEX 1 and 4 (respectively), see page A-24.

Enable Networking Feature

Use PGM 320, then FLEX 1, see page A-22.

Set IP Address of Destination System's VOIB

Use PGM 324, then FLEX 4, see page A-25.

Configure the VOIP networking between Systems A & B as shown below:

At System A:

1. Use (PGM 105), press [SPEED], and enter 100 and 199.
2. Press [HOLD] to store the setting.

At System B:

1. Use (PGM 105) + [SPEED], and enter 200 and 299.
2. Press [HOLD] to store the setting.

EXAMPLE: In the following example, DID TYPE 1 is appropriate for the set up. To configure the net CO line connection, the net CO group and type must be set to '01' and 'NET'.

For Both Systems A & B

PGM	RANGE	FLEX	FEATURE	VALUE
140	VOIB CO range	--	CO Service Type	DID/MSN (3)
143	VOIB CO range	4	DID Conversion Type	1
322	VOIB CO range	1	Network CO Group	01
		4	Network CO Type	NET (1)

For System A only

PGM	BIN	FLEX	FEATURE	VALUE
324	-	1	System usage	NET (0)
	00	2	Numbering plan code	1#**
	-	3	Numbering Plan Co Group	00
	-	4	VOIP Called Party Information 1/2/3/4	0.0.0.0
	-	1	System Usage	NET (0)
	01	2	Numbering Plan Code	2**
	-	3	Numbering Plan Co Group	01
	-	4	VOIP CPN Information 1/2/3/4 (note)	VOIB IP Address of system B

For System B only

PGM	BIN	FLEX	FEATURE	VALUE
324	-	1	System Usage	NET (0)
	00	2	Numbering Plan Code	2#**
	-	3	Numbering Plan CO Group	00
	-	4	VoIP Called Party Information 1/2/3/4	0.0.0.0
	-	1	System Usage	NET (0)
	01	2	Numbering Plan Code	1**
	-	3	Numbering Plan CO Group	01
	-	4	VOIP CPN Information 1/2/3/4 (note)	VOIB IP Address of system A

Networking Programming Tables

Networking Basic Attributes (PGM 320)

Press the [TRANS/PGM] button, dial 320 and follow the specific procedure:

FEATURE / DESCRIPTION	PROCEDURE	DEFAULT / VALUES
Networking Enable -- used to enable the networking feature. To set this Admin value to ON, the networking software lock-key must be installed when a Station user enters the software lock-key check dialing command ([TRANS/PGM] + 78).	PGM 320 + FLEX 1 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Networking Retry Count -- used to retry the connection when a System error is detected during network connection signaling. This value is only used when the networking feature is executed through the public switching network. This value is not used at the networking feature between direct connected SBX IP 320 systems.	PGM 320 + FLEX 2 + 00 (2-digit Retry Count number) + [HOLD/SAVE]	VALUES -- Range = 00-99
Networking CNIP Enable -- name of calling station is sent to the called system between SBX IP 320 systems. CNIP is displayed on called party station LCD according to Admin programming. If the CNIP and CLI are received together, CNIP is prior to CLI.	PGM 320 + FLEX 3 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Networking CONP Enable -- name of the answered station is sent to the calling system between SBX IP 320 systems. CONP is displayed on the calling party station LCD according to Admin programming.	PGM 320 + FLEX 4 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Networking Signal Method -- select the information element type for networking supplementary service message. FACILITY/USER-TO-USER information element can be used for networking supplementary service message.	PGM 320 + FLEX 5 + FAC (Value) + [HOLD/SAVE]	VALUES -- 0 = UUS 1 = FAC
Networking CAS Enable -- enable Centralized attendant in master system, CAS should be disabled.	PGM 320 + FLEX 6 + OFF (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

FEATURE / DESCRIPTION	PROCEDURE	DEFAULT / VALUES
Networking VPN Enable (Reserved)	PGM 320 + FLEX 7 + OFF (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Networking Call Completion Retain Mode -- used to set the networking supplementary signaling type of the call completion. If this value is set to ON, the signaling of call completion retain mode is executed.	PGM 320 + FLEX 8 + OFF (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Networking Supplementary Attributes (PGM 321)

Press the [TRANS/PGM] button, dial 321, and follow the specific procedure:

FEATURE / DESCRIPTION	PROCEDURE	DEFAULT / VALUES
Networking Transfer Mode -- used to select the signaling type for networking transfer mode.	PGM 321 + FLEX 1 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = Join 1 = Reroute
TCP Port -- used to set the TCP port for BLF messaging.	PGM 321 + FLEX 2 + Value (4 digits) + [HOLD/SAVE]	VALUES -- Range = 0000-9999 Default = 9000
UDP Port -- used to set the UDP port for BLF messaging.	PGM 321 + FLEX 3 + Value (4 digits) + [HOLD/SAVE]	VALUES -- Range = 0000-9999 Default = 9001
BLF Manager IP Address -- used to set the IP Address for the BLF manager.	PGM 321 + FLEX 4 + BLF Manager IP Address + [HOLD/SAVE]	VALUES -- 12 digits
Duration of BLF Status -- used to set the duration of BLF status messaging.	PGM 321 + FLEX 5 + 02 (secs - 2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-20
Multicast IP Address -- used to set the multicast IP address for BLF service.	PGM 321 + FLEX 6 + Multicast IP Address + [HOLD/SAVE]	VALUES -- 12 digits
Net Transfer Fault Recall Timer -- used to designate the amount of time for the Network Transfer Fault Recall timer.	PGM 321 + FLEX 7 + 010 (secs - 3 digits) + [HOLD/SAVE]	VALUES -- Range = 001-300
VOIP Call Reroute CO Group -- used to set the CO group of gatekeeper.	PGM 321 + FLEX 8 + 00 (Group No. - 2 digit) + [HOLD/SAVE]	VALUES -- Range = 00-24

Networking CO Line Attributes (PGM 322)

1. Press the [TRANS/PGM] button and dial 322.
2. Enter the CO Line Range and follow the specific procedure:

FEATURE / DESCRIPTION	PROCEDURE	DEFAULT / VALUES
Networking CO Line Group -- used to select the CO Line Group for networking calls.	PGM 322 + FLEX 1 + 00 (Net CO Line Group) + [HOLD/SAVE]	VALUES -- Range = 00-24
VOIP Mode -- allows the choice of using H.323 or SIP at each VOIP CO line.	PGM 322 + FLEX 2 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = H.323 1 = SIP
Usage Gatekeeper -- used to check the usage of the gatekeeper	PGM 322 + FLEX 3 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = On 1 = Off
Networking CO Line Type -- used to select the type of system that is connected through the networking CO line.	PGM 322 + FLEX 4 + 0 (PSTN) + [HOLD/SAVE]	VALUES -- 0 = PSTN 1 = NET
DTMF Mode -- determines the DTMF Mode at each VOIP CO line.	PGM 322 + FLEX 5 + 2 (Value) + [HOLD/SAVE]	VALUES -- 2 = Inband DTMF 3 = RFC2833 DTMF 4 = Outband DTMF

Networking Routing Table (PGM 324)

1. Press the [TRANS/PGM] button and dial 324.
2. Dial Net Numbering Plan Table index (00-71) and follow the specific procedure:

FEATURE / DESCRIPTION	PROCEDURE	DEFAULT / VALUES
System Usage -- used to set the networking connection type of the selected table entries.	PGM 324 + FLEX 1 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = NET 1 = PSTN
Net Numbering Plan Code -- used to set the networking number code of the selected table entries.	PGM 324+ FLEX 2 + Numbering Plan Code (max. 16 digits - refer to VALUES) + [HOLD/SAVE]	VALUES -- * = digits 0-9 can be entered. # = follows digits to signify an int sta no

FEATURE / DESCRIPTION	PROCEDURE	DEFAULT / VALUES
Net Number Plan CO Line Group -- used to select the CO line group for routing networking calls.	PGM 324 + FLEX 3 + Net CO Line Group + [HOLD/SAVE]	VALUES -- Range = 00-24
CPN IP Information -- the IP address for VoIP (CPN info 1-CPN info 4). If the destination system has several IP addresses and all channels of the 1st address is busy, then the system tries to connect to the 2nd address.	PGM 324 + FLEX 4 + FLEX 1 (refer to VALUES) + IP Address (12 digits) + [HOLD/SAVE]	VALUES -- FLEX 1 = 1ST IP addr FLEX 2 = 2ND IP addr FLEX 3 = 3RD IP addr FLEX 4 = 4TH IP addr
Alternate Speed Dial Bin -- alternate number used when the networking path experiences fatal problems.	PGM 324 + FLEX 5 + Speed Bin Number + [HOLD/SAVE]	VALUES -- Range = 2000-2499
Destination MPB IP -- designates the IP Address of the system used to support DECT mobility service.	PGM 324 + FLEX 6 + IP Address + [HOLD/SAVE]	VALUES -- 12 digits
Digit Repeat -- when value is set to YES, the PSTN is not connected with the PSTN line directly, but is connected by another networking system.	PGM 324 + FLEX 7 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = No 1 = Yes
CO ATD Code CLI -- used to determine whether the CLI number is sent to the PX.	PGM 324 + FLEX 8 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Firewall Routing -- If networking system uses the same network, set Firewall Routing to NO (Off) and local IP address will be used for the networking feature. If the networking system uses a different network, set Firewall Routing to YES (On) and the Firewall IP address will be used for the networking feature.	PGM 324 + FLEX 9 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = No 1 = Yes
Authorization Code COS Use -- if value is set to YES, the COS of Transit-out call will be determined based on the password that the user dialed. The COS of the password in the AUTHORIZATION CODE TABLE (PGM 227) is used.	PGM 324 + FLEX 10 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = No 1 = Yes
SMDR Dial Hidden -- If value is set to ENABLE, Dialed number of CO Call is not showed on SMDR record.	PGM 324 + FLEX 11 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = No 1 = Yes

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VoIP Service

This chapter describes the feature settings and protocols needed to configure the SBX IP system so it will work with the VoIP Service:

VOIP IP Setting - PGM 340

Call by IP Address
Call by Routing Table
Early H.245
H.245 Tunneling
Normal/Fast mode for H.323
TOS for H.323

Related VoIP Programming Tables:

Gatekeeper Setting - PGM 341
RSG/IP Phone Programming - PGM 380-397
SIP Programming - PGM 500- 501

Call By IP Address

This feature allows a user to make calls using IP numbers or by directly dialing IP numbers.

CONDITIONS

- When programming Speed Dial for Direct Call, # must not be used (for example to assign the number 156*147*3*139 to Speed Dial, enter 156*147*3*139, and not 156*147*3*139#).
- Access is denied to incoming DISA calls, if the seized line used by the Co access Code is a VOIB line.

ADMIN PROGRAMMING

Set CO Line Service Type

Use PGM 140 … see page 1-135.

Set VOIB IP

IP Address (Skip:#) -- used to set the IP address of the VOIP board.	PGM 340 + FLEX 1 + IP Address (VALUE) + [HOLD/SAVE]	VALUES -- 12 digits
Gateway Address (Skip:#) -- used to set the gateway address of the VOIP board.	PGM 340 + FLEX 2 + IP Address (Value) + [HOLD/SAVE]	VALUES -- 12 digits
Subnet Mask (Skip:#) -- used to set the subnet mask of the VOIP board.	PGM 340 + FLEX 3 + Subnet Mask (12 digits) + [HOLD/SAVE]	VALUES -- Default = 255.255.255.0
DNS Address (Skip:#) -- used to set the DNS address of the VOIP board.	PGM 340 + FLEX 4 + DNS Address + [HOLD/SAVE]	12 digits

Set Ring Assignment

Use PGM 144 … see page 1-13.

OPERATION / SETUP

To make use an IP address to make a call:

1. Press the appropriate CO line, {POOL}, or CO button.

   -or-

   Dial the CO line, or Group code.

   A dial tone sounds.
2. Enter the IP address.

   NOTE: Use * instead of the dots in the IP address (for example, if the IP Address is 156.147.3.201, the following would be entered: 156*147*3*201)
3. Press # to place the call.
4. If the entered destination is a user within the SBX IP system, ringing follows the pre-defined Ring Assignment.

Call by Routing Table

This feature uses station numbers that are programmed in the Network Routing Table - see ADMIN PROGRAMMING.

CONDITIONS

- For calls accessing the Network Table, VOIB calls follow the ISDN DID call procedure (that is DID Conversion Type, Digit Conversion Table, Flexible DID Table, etc.) - see page 1-125.
- VOIP CO calls do not follow the assigned Ring Assignment even if DID/DISA destinations are forwarded to the Attendant. The call is directly transferred to the Attendant.
- If the Network Routing Table has more than one table entry that uses same routing number but a different destination, the call is routed to the default destination of the Network Routing Table.
- To transfer incoming calls to another system via VOIB, the user must wait for the ringback tone before hanging up.
- DSS, HUNT, VMIB, VMIB # and System Speed can be used as destinations in the Flexible DID Table - see ADMIN PROGRAMMING.
- CLIP and COLP are not applied to VOIP CO Calls.
- CO Line Service Type must be set to ISDN DID/MSN - see ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Set CO Line Service Type

Use PGM 140 … see page 1-135.

Set VOIB IP

Use PGM 340 … see page B-2

Set DID Conversion Type

Use PGM 143, then FLEX 4 … see page 1-125.

Access Flexible DID Table (used in case of DID Conversion Type 2)

Use PGM 231 … see page 1-127.

Set Networking CO Group

Use PGM 322, then FLEX 1 … see page A-24.

Access Networking Routing Table

Use PGM 324 … see page A-24.

Set DID/DISA Destination

Use PGM 167 … see page 1-126.

OPERATION / SETUP

To use the Call by Routing Table:

Dial the station number (included in the range from start to end as set up in network Routing Table).

- The system selects a VOIP CO line within the CO Group as assigned in the Network Routing Table.
- The user hears a Ring Back Tone.
- In case of an invalid entry, busy or no answer, the call goes to the designated DID/DISA destination - see ADMIN PROGRAMMING.

Early H.245

The Early H.245 option allows the H245 channel to be setup earlier, and hence speeds up the call setup. When Early H245 is enabled, the H245 channel address is included in the Setup message. This speeds up the call process since the H245 channel negotiations can proceed parallel to H225.

ADMIN PROGRAMMING

Enable Early H.245

Early H.245 -- selects Early H.245 Mode.	PGM 340 + FLEX 19 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

H.245 Tunneling

This allows entities in the signalling path (such as gatekeepers) to perform functions (such as divert on no-reply or other advanced call control) that result in a Q.931 call state at one endpoint that differs from the actual call state at another endpoint.

Such intermediate entities ensure that H.245 messages (encapsulated in Q.931 messages) are forwarded to the other endpoint. Furthermore, such messages are forwarded even if the Q.931 message in which the H.245 message is encapsulated might be consumed (and not forwarded to) the other endpoint.

This is accomplished by transferring the encapsulated H.245 message into a FACILITY message, with the h323-message-body set as "empty". For example, if a gatekeeper has already sent a CONNECT message to a calling endpoint, then later receives a CONNECT message from a called endpoint that contains an encapsulated H.245 message, it will forward the H.245 message using a FACILITY message.

ADMIN PROGRAMMING

Enable H.245 Tunneling

H.245 Tunneling -- selects H.245 Tunneling.	PGM 340 + FLEX 20 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Normal/Fast mode for H.323

H.323 endpoints may establish media channels in a call by using either the procedures defined in Recommendation H.245, or the "Fast Connect" procedure described as follows:

The Fast Connect procedure allows the endpoints to establish a basic point-to-point call with as few as one round-trip message exchange. This enables immediate media stream delivery upon call connection.

The calling endpoint initiates the Fast Connect procedure by sending a SETUP message containing the fastStart element to the called endpoint. The fastStart element consists of a sequence of OpenLogicalChannel structures describing media channels. The calling endpoint sends and receives these media channels (including all of the parameters necessary) to immediately open and begin transferring media on the channels.

ADMIN PROGRAMMING

Enable Normal/Fast Mode

H.323 (Fast) Mode -- selects H.323 Mode.	PGM 340+ FLEX 18 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = Normal 1 = Fast

TOS for H.323

In the IP Datagram, 8 bits are reserved for the Service type. These bits can be further broken into five sub-fields as shown below.

0	1	2	3	4	5	6	7
PRECEDENCE			D	T	R	UNUSED	

The three precedence bits specify the datagram precedence varying from 0 to 7. This allows the senders to indicate the importance of each datagram.

The TOS provides a mechanism that can allow control information precedence over data. The other 3 bits represent the following:

- D - requests low delay
- T - requests high throughput
- R - requests high reliability

The precedence bits (0,1,2) are significant in having an effect on load. So, they are varied to try to monitor the changes in the RTT (Round Trip Time) for varying loads.

At low loads, the traffic is not significant enough for the TOS to have any effect on the ping as the packets will get through anyway. Similarly at high loads, the TOS will not have an effect on the ping statistics, but instead in cases where there's too much traffic, there is a significant amount of packet loss, and round trip times are elongated regardless of the precedence set.

Somewhere in between these two extremes a window is expected in which the TOS actually has an effect on the RTT/packet loss (that is, high RTT/Packet loss at TOS=0, and low RTT/Packet loss at TOS=224).

Executing "ping2" for different TOS with no load.

The modified NIKHEF ping code is run from nereus.slac.stanford.edutonocdev1-qos.es.net with TOS: 0, 32, 64, 96, 128, 160, 192, 224 & No TOS specification. The code is run for 10,000 packets of each TOS. The TOS numbers represent the precedence bits as follows.

PRECEDENCE	BITS (0,1,2)	TOS
0	00	00
1	001	32
2	010	64
3	011	96
4	100	128
5	101	160
6	110	192
7	111	224

Precedence 0 (TOS 0) is NORMAL PRECEDENCE (low precedence), while precedence 7 (TOS 224) is referred to as network control (High precedence).

Since there is no load on the line, the TOS is expected to have no effect on the ping statistics. Therefore, the obtained results are similar to the predicted results.

ADMIN PROGRAMMING

Set Precedence Value

TOS Precedence -- sets TOS Precedence.	PGM 340 + FLEX 21 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0-7

Other VOIB Programming Codes

VOIP IP Setting (340)

Press the [TRANS/PGM] button, dial 340, and follow the specific procedure:

Trace Password -- used to set the password which is needed to contact the VOIP board for trace.	PGM 340 + FLEX 5 + Value (10 characters, numbers only) + [HOLD/SAVE]	--
Default Codec -- used to set the default codec for the VOIP board.	PGM 340 + FLEX 6 + Value + [HOLD/SAVE]	VALUES -- 0 = G.723.1 (Default) 1 = G.729 2 = G.711_ALAW 3 = G.711_ULAW 4 = G.729A
Default Gain -- used to set the default gain of the VOIP board.	PGM 340 + FLEX 7 + 31 (Value) + [HOLD/SAVE]	VALUES -- Range = 01-62
No Delay (TOS) -- used to designate if the VOIP board will have a delay.	PGM 340 + FLEX 8 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Throughput (TOS) -- used to set VOIP board throughput.	PGM 340 + FLEX 9 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Normal 1 = High
Reliability (TOS) -- used to set VOIP board reliability.	PGM 340 + FLEX 10 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Normal 1 = High
Firewall IP Address -- used to set the NAT Firewall IP address of VOIP board	PGM 340 + FLEX 11 + Value + [HOLD/SAVE]	VALUES -- 12 digits (Firewall IP address)
VOIB Mode -- used to select whether the mode of the VOIP board is H.323, SIP, or DUAL. If set to DUAL, the selected VOIP board serves both H.323 and SIP automatically.	PGM 340 + FLEX 12 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = H.323 1 = SIP 2 = DUAL
Silence Detection -- used to select the Silence Detection of VOIP board.	PGM 340 + FLEX 13 + 0 (Value) + HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Echo Canceler -- used to select the Echo Canceller of VOIP board.	PGM 340 + FLEX 14 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
DTMF Mode -- used to set the DTMF mode of the VOIP board.	PGM 340 + FLEX 15 + Value + [HOLD/SAVE]	VALUES -- 2 = Inband DTMF 3 = RFC 2833 4 = Outband DTMF
Jitter Buffer -- used to set the Jitter buffer of VOIP board.	PGM 340 + FLEX 16 + 150 (Value) + [HOLD/SAVE]	VALUES -- 050-300 ms
Voice Monitor -- used to set the Voice Monitor of the VOIP board	PGM 340 + FLEX 17 + 0 (Value) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Fax Mode -- If value is set to ON, a single ring is provided and Attendant recall is not in operation. (The fax feature is not supported on SIP trunks at this time.)	PGM 340 + FLEX 22 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Gatekeeper Setting (PGM 341)

Press the [TRANS/PGM] button, dial 341, and follow the specific procedure:

Gatekeeper Usage -- used to select Gatekeeper for use or not.	PGM 341 + FLEX 1 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Gatekeeper Call Mode -- used to set the Call Mode.	PGM 341 + FLEX 2 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = Direct 1 = Gatekeeper Reroute
Gatekeeper Open H.245 -- used to open the H245 port or not.	PGM 341 + FLEX 3 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Gatekeeper H.245 Tunneling	PGM 341 + FLEX 4 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Gatekeeper Pre-granted ARQ	PGM 341 + FLEX 5 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Gatekeeper Out of Band Flash	PGM 341 + FLEX 6 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
Gatekeeper Time to Live -- used to set the interval of RRQ message.	PGM 341 + FLEX 7 + 030 (Value) + [HOLD/SAVE]	VALUES -- 000-250 (sec)
Gatekeeper Address -- used to set the Gatekeeper IP address to register (Skip: #).	PGM 341 + FLEX 8 + Value + [HOLD/SAVE]	VALUES -- 12-digit IP Address
Gatekeeper Find Address -- (Skip: #)	PGM 341 + FLEX 9 + Value + [HOLD/SAVE]	VALUES -- 12-digit IP Address
Gatekeeper Find Port	PGM 341 + FLEX 10 + 1718 (Value) + [HOLD/SAVE]	VALUES -- 4-digit Port Number
Gatekeeper RAS Signal Port -- used to set the Gatekeeper RAS signal port.	PGM 341 + FLEX 11 + 1719 (Value) + [HOLD/SAVE]	VALUES -- 4-digit Port Number
Gatekeeper Signal Port -- used to set the Gatekeeper call signal port.	PGM 341 + FLEX 12 + 1720 (Value) + [HOLD/SAVE]	VALUES -- 4-digit Port Number
VoIB Gatekeeper ID -- used to set a unique Gatekeeper's ID.	PGM 341 + FLEX 13 + Value + [HOLD/SAVE]	VALUES -- Up to 23 characters

VoIB H.323 ID -- used to set a unique VOIB's ID.	PGM 341 + FLEX 14 + Value + [HOLD/SAVE]	VALUES -- Up to 23 characters
VoIB E164 Address -- used to set the station number.	PGM 341 + FLEX 15 + Value + [HOLD/SAVE]	VALUES -- Up to 23 characters
VoIB Terminal Alias -- Reserved	PGM 341 + FLEX 16 + Value + [HOLD/SAVE]	VALUES -- 20 digits

RSG/IP Phone Programming (PGM 380-397)

VOIB Slot Assignment, RSG/IP Phone (PGM 380)

The VOIB slot and VOIB channel for the RSG/IP Phone can be assigned. The RSG is serviced through the VOIB, so the VOIB for the RSG must be assigned.

Press the [TRANS/PGM] button, dial 380, and follow the specific procedure:

VOIB Slot For RSP/IP Phone -- designates the VOIB slot assignment for RSG/IP phone.	PGM 380 + FLEX 1 + 10 + [HOLD/SAVE]	(must be slot 10)
VOIB Channel For RSG/IP Phone -- designates the VOIB Channel number used for the RSP/IP phone.	PGM 380 + FLEX 2 + Channel Range + [HOLD/SAVE]	Channel Range = 0-8

RSG/IP Phone Port Number Assignment (PGM 381)

Press the [TRANS/PGM] button, dial 381, and follow the specific procedure:

RSG Number -- N/A Number of RSG to register. Use PGM 382 Flex 2, number of IP phones.	PGM 381 + FLEX 1	n/a
IP Phone Number -- the IP Phone number to be serviced by the system (up to 16 IP phones can be registered on the system).	PGM 381 + FLEX 2 + IP Phone Number + [HOLD/SAVE]	Range = 00-16

RSG/IP Attributes (PGM 382)

Press the [TRANS/PGM] button, dial 382, and follow the specific procedure:

Transfer Mode -- determines Transfer mode (IP address or MAC address) when using RSG/IP phone; when using RSG/IP phone, messages are sent to various devices using an IP Address.	PGM 382 + FLEX 1 + Value + HOLD/SAVE]	VALUES -- 0 = IP (Default) 1 = MAC
Casting Mode -- determines Casting mode (Uni-cast or Multi-cast) when using RSG/IP phone.	PGM 382 + FLEX 2 + Value + [HOLD/SAVE]	VALUES -- 0 = UNI (Default) 1 = MULTI
Tone Source -- determines source for System tones when using RSG/IP phone.	PGM 382 + FLEX 3 + Value + [HOLD/SAVE]	VALUES -- 0 = Off (Remote - Default) RSGM/IP Phone 1 = On (SBX tone source)
Peer to Peer -- if value is set to ON, IP phone to IP phone is connected directly. This means that no VOIB channel is used for IP phone to IP phone call case.	PGM 382 + FLEX 4 + Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On (Default)
Codec Type -- determines Codec Type used with RSG/IP phone.	PGM 382 + FLEX 5 + Value + [HOLD/SAVE]	VALUES -- 0 = G.711_ALAW (Default) 1 = G.711_ULAW 2 = G.723.1 3 = G.729 4 = G.729A
First Access RSG CO -- if set to ON, the Station can access a CO line using the RSG and dialing the CO Line access code in the 1st available CO group (ex., 9).	PGM 382 + FLEX 6 + Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On (Default)
Ring Without CO Ring Assign -- designates the RSG Stations that will receive incoming CO rings, even when CO ring is not assigned.	PGM 382 + FLEX 7 + Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On (Default)

IP Phone Attributes (PGM 386)

It is recommended that you use PC Admin to enter the MAC Address,

1. Press the [TRANS/PGM] button and dial 386.
2. Enter the appropriate Bin number (range = 01-16) and follow the specific procedure:

Set MAC Address -- is used to register an IP Phone to the system, by entering its MAC Address (refer to Button Table).	PGM 386 + Bin number (01-16) + FLEX 1 + MAC Address + [HOLD/SAVE]	Default = 00-00-00-00-00-00
IP Address Display -- displays the IP Address of the IP phone.	PGM 386+ FLEX 2	--
Port View -- displays the Station Number of IP phone.	PGM 386 + FLEX 3	--
Port Number View -- displays the Port Number of IP phone.	PGM 386 + FLEX 4	--
NAT IP Address Display -- displays the NAT IP Address of IP phone.	PGM 386 + FLEX 5	--
NAT Port Number -- displays the NAT Port Numbers being used.	PGM 386 + FLEX 6	--
STUN Enabled -- if an IP Phone is connected to the SBX IP system, this feature shows if the IP station uses NAT or PAT (Display Only); None, PAT, NAT or NAT/PAT	PGM 386 + FLEX 7	--
CTI IP Address -- CTI IP Address to support first party CTI.	PGM 386 + FLEX 8 + Value + [HOLD/SAVE]	VALUES -- 12-digit IP Address
IPSEC -- when value is set to ON, the VOIB uses IPSEC.	PGM 386 + FLEX 9 + Value + [HOLD/SAVE]	VALUES -- 0 = Off (Default) 1 = On
Outside NAT Firewall -- parameter used for deciding RTP relay or not.	PGM 386 + FLEX 10 + Value + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On
User ID -- Nomad IP & Nomad SP can be registered to the system by entering this User ID / Password. This allows the user to register easily by using same ID / Password even if their MAC address is changed.	PGM 386 + FLEX 11 + Value + [HOLD/SAVE]	VALUES -- max 12 characters
User Password -- Nomad IP & Nomad SP can be registered to the system by entering this User ID / Password. This allows the user to register easily by using same ID / Password even if their MAC address is changed.	PGM 386 + FLEX 12 + Value + [HOLD/SAVE]	VALUES -- max 12 characters

RSG / IP Phone RX Gain Control (PGM 396)

RX gain tables for IP phone:

RSG_IP PHONE RX from DKTU	PGM 396 + FLEX 1	VALUES -- Range = 00-63
RSG_IP PHONE RX from SLT	PGM 396 + FLEX 2	
IP PHONE RX from CTR SLT	PGM 396 + FLEX 3	
IP PHONE RX from WKT	PGM 396 + FLEX 4	
RSG_IP PHONE RX from ACO	PGM 396 + FLEX 5	
IP PHONE RX from CTR ACO	PGM 396 + FLEX 6	
RSG_IP PHONE RX from DCO	PGM 396 + FLEX 7	
RSG_IP PHONE RX from VMIB	PGM 396 + FLEX 8	
RSG_IP PHONE RX from DTMF	PGM 396 + FLEX 9	
RSG_IP PHONE RX from TONE	PGM 396 + FLEX 10	
RSG_IP PHONE RX from MUSIC 1	PGM 396 + FLEX 11	
RSG_IP PHONE RX from MUSIC 2	PGM 396 + FLEX 12	
IP PHONE RX from R_DKT	PGM 396 + FLEX 13	
IP PHONE RX from R_SLT	PGM 396 + FLEX 14	
IP PHONE RX from R_LCO	PGM 396 + FLEX 15	
RSG_IP PHONE RX from IP Phone	PGM 396 + FLEX 16	

RSG IP Phone TX Gain Control (PGM 397)

TX gain tables for IP phone:

RSG_IP PHONE RX from DKTU	PGM 397 + FLEX 1	VALUES -- Range = 00-63
RSG_IP PHONE RX from SLT	PGM 397 + FLEX 2	
IP PHONE TX to CTR_SLT	PGM 397 + FLEX 3	
IP PHONE TX to WKT	PGM 397 + FLEX 4	
IP PHONE TX to ACO	PGM 397 + FLEX 5	
IP PHONE TX to CTR_ACO	PGM 397 + FLEX 6	
RSG_IP PHONE RX from DCO	PGM 397 + FLEX 7	
RSG_IP PHONE RX from DVU	PGM 397 + FLEX 8	

SIP Programming (PGM 500-501)

SIP Attributes I (PGM 500)

The SIP Attribute 1 Program is used to set Proxy Server and DNS settings for the VOIB.

IMPORTANT: --> This programming can only be done by using PC Admin.

Proxy Server Address -- SIP proxy server address.	max. 32 digits character string (e.g. abcd@efg)
Proxy Server Port -- SIP proxy port number.	0000-9999
Proxy Registration Timer -- SIP proxy server registration timer.	0-65535 sec
Use Outbound Proxy -- usage of SIP outbound proxy.	Off / On
Primary DNS Address -- IP address of primary DNS to find SIP proxy.	max. 32 digits character string of IP address (e.g. xxx.xxx.xxx.xxx)
Secondary DNS Address -- IP address of secondary DNS to find SIP proxy.	max. 32 digits character string of IP address (e.g. xxx.xxx.xxx.xxx)
Domain -- SIP user domain name. When a user makes a SIP outgoing call, this domain name is added to dialed digit. (ex. <dialed digit>@domain.name.com).	VALUE: max. 32 digits character string (e.g. domain.name.com)
Connection Mode -- used to transport protocol of SIP.	TCP / UDP
100Rel Support -- if this feature is set to ON, the system supports 100Rel.	Off / On
Use R-port Method -- if feature is set to ON, the R-port is supported.	Off / On
Use Single Codec Only -- if feature is set to ON, only a single codec is supported.	Off / On
Remote Party ID -- used to support "Remote Party ID" for CID.	Off / On
181 Message -- if feature is set to ON, the 181 message is supported.	Off / On
IP Centrex -- if feature is set to ON, IP centrex service is supported.	Off / On

SIP Attributes II (PGM 501)

The SIP Attributes 2 Program is used to set the SIP User table. The maximum table bin number is 32.

IMPORTANT: **--> This programming can only be done by using PC Admin.**

User ID -- used to set the SIP User ID which is used in the "From" Header (ex: caller@caller.domain	max. 64 digits of character string
Authentication User Name -- used to set the SIP Authentication User Name if authentication is used.	max. 64 digits of character string
Authentication User Password -- used to set the SIP Authentication User Password if authentication is used	max. 64 digits of character string
Contact Number -- used by the VOIB "Contact" header using this field and VOIB IP address. Usually set the station number or DID number to route this SIP UID.	max. 12 digits of character string
User ID Registration -- used to determine registration of this SIP UID.	Provision / Register
User ID Usage -- allows you to choose whether or not to use User ID.	On / Off
Associated Station -- used to support a SIP supplement service for the Broad Works soft switch only: - Click to dial - Click to answer - Voice Mail notify	station number

Voicemail Service

Administrator Mailbox

This feature provides a mailbox that allows a user to perform common administrative tasks associated with voice mailboxes using telephone commands. The administrator mailbox can also be used to record a broadcast message that is delivered to all mailboxes in the system.

Using Admin Mailbox Options

When a user enters a voice mailbox, they will hear the following prompts:

- Press 1 to listen to your messages.
- Press 2 to record your greeting.
- Press 3 to send a message.
- Press 4 for personal options.
- Press 9 to access administrative options.

  If Admin Rights are enabled, the user will also hear these admin options after pressing 9:

  - To add a mailbox, press 1.
  - To delete a mailbox, press 2.
  - To reset a mailbox password, press 3.
  - To record a mailbox greeting, press 4.
  - To record a broadcast message, press 5.
  - To record a mailbox name, press 6.
  - Press * to go back one level.
- Press # to access another mailbox.

CONDITIONS

- There are no limits on the number of mailboxes that can be marked as administrators.
- Only 1 mailbox can be active in the administration area at a time.

ADMIN PROGRAMMING

Enable VMIB Access

Use PGM 113, then FLEX 2 … see page C-10

Enable Admin Rights

Admin Rights-- if value is set to ON, a mailbox user will be granted access to the administrator menu [9] in their mailbox.	PGM 127 + FLEX 1 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Set COS (1-5)

COS (1-5) -- assigns one of the five COS settings to the mailbox. The default is COS 1.	PGM 127 + FLEX 2 + 1 (COS) + [HOLD/SAVE]	VALUES -- 1-5

OPERATION / SETUP

Once the System Administrator assigns Admin Rights to a station user in PGM 127, the user can perform the following administrative funtions for all active mailboxes in the system.

To Add a Mailbox:

1. Log in to Voicemail and press 9 to access Administrator functions.
2. Dial 1 to select "Add a mailbox".
3. At the prompt, enter the mailbox number you wish to add.
4. Then enter the desired COS number (1-5) at the prompt.
5. When you hear the next prompt, press 1 to confirm or # to cancel and go back to the administrator main menu.

To Delete a Mailbox:

NOTE: When a mailbox is deleted the following will also be removed: user greeting, all voice messages, page message, and the user name.

1. Log in to Voicemail and press 9 to access Administrator functions.
2. Dial 2 to select "Delete mailbox ".
3. At the prompt, enter the mailbox number you wish to remove from the system.
4. Press 1 to confirm, or # to cancel and go back to the administration main menu.

To Reset a Mailbox Password:

1. Log in to Voicemail and press 9 to access Administrator functions.
2. Dial 3 to select "Reset mailbox password".
3. Enter desired mailbox number (the password will reset to match the mailbox number).
4. Press 1 to confirm the mailbox number, or # to cancel and go back to the administration main menu.

To Record a Mailbox Greeting:

1. Log in to Voicemail and press 9 to access Administrator functions.
2. Dial 4 to select "Record mailbox greeting".
3. Enter the desired mailbox number.
4. At the prompt, select one of the following actions:
   - to listen press 1.
   - to record press 2.
   - to delete press 3.
   - to cancel and go back to the administration main menu, press #.

To Record a Broadcast Message:

Once the message is recorded and sent, it is placed in all active mailboxes in the system.

1. Log in to Voicemail and press 9 to access Administrator functions.
2. Dial 5 to select "Record a broadcast message".
3. Enter the desired broadcast message number (01-10) and you will hear the following options:
   - Press 1 to listen (to current active messages).
   - Press 2 to record (broadcast message and send to all active mailboxes).
   - Press 3 to delete (activated/distributed message).
   - Press 4 to send (a broadcast message).
   - Press # to cancel and go back to the administrator main menu.

To Record a Mailbox Name:

1. Log in to Voicemail and press 9 to access Administrator functions.
2. Dial 6 to select "Record mailbox name".
3. Enter the desired mailbox number.
4. At the prompt, select one of the following actions:
   - to listen press 1. If a name has been recorded.)
   - to record press 2.
   - to delete press 3.
   - to cancel and go back to the administrator main menu press #.

Announce Only Mailbox

This feature provides a method to mark a mailbox as an "announce" type. When a caller enters the mailbox, a customized greeting plays and then returns the caller to the previous menu or teminates the call, whichever is programmed.

CONDITIONS

- The Announcement Only option must be set in Admin Programming.
- There is no limit to the number of mailboxes that can be marked as "announcement only".
- An Announce Only mailbox does not accept voice messages.

ADMIN PROGRAMMING

Enable VMIB Access

Use PGM 113, then FLEX 2 … see page C-10

Enable Announce Only Mailbox

Announce Only Mailbox -- if value is set to ON, the station user can designate which mailboxes will be Annouce Only.	PGM 127 + FLEX 3 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Set Announce Only Action

Announce Only Action -- this value allows the station user to designate the action a caller will receive when entering their Announce Only mailbox.	PGM 127 + FLEX 4 + 1 (Value) + [HOLD/SAVE]	VALUES -- 0 = Hang-up 1 = Previous Menu

Announcements

Record System Greetings

Although the SBX IP 320 provides a series of default pre-recorded greetings and prompts (in the VMIB), these recordings can be customized and re-recorded for use throughout the system.

IMPORTANT: The VMIB MUST BE INSTALLED in order for system greetings and prompts to be recorded. An error tone sounds if an attempt is made to record system greetings and prompts in a system without a VMIB.

CONDITIONS

- Default Prompts for date and time are contained in VMIB to be used for date and time stamping. These prompts allow envelope information to be stored with any voice mail messages received by a user.
- There are 70 default system greeting messages (001-070). There are 30 fixed system greeting messages (71-100).

NO.	FIXED SYSTEM MESSAGES	NO.	FIXED SYSTEM MESSAGES
071	*reserved*	086	*reserved*
072	*reserved*	087	*reserved*
073	Invalid Number Prompt	088	Remote VMIB Control Main Menu Prompt
074	Time Out Prompt	089	Remote VMIB Sub-menu for digit 1 in Main Menu
075	Retry Prompt	090	*reserved*
076	Transfer to Attendant Prompt	091	*reserved*
077	*reserved*	092	*reserved*
078	Leave Message Prompt	093	Remote VMIB Sub-menu for digit 2 in Main Menu
079	Record Start Prompt	094	Remote VMIB Sub-menu for digit 3 in Main Menu
080	Authorization Code Prompt	095	Remote VMIB Sub-menu for digit * in Main Menu
081	Busy Prompt	096	Leave Message after Tone Prompt
082	Reserved (office version) Wakeup Prompt (hotel version)	097	Message Waiting Indication Prompt
083	Station Off-net Forward Prompt	098	Default User Greeting Prompt
084	DND Prompt	099	--
085	No Answer Prompt	100	--

- Although the default recorded greetings and prompts can be changed, the numbering of system greetings and prompts cannot.
- System greetings and prompts can only be recorded at a System Attendant station.
- There is no time limit for recorded system greetings and prompts from the System Attendant station.

- When the Attendant accesses a specific greeting/prompt number, any existing recording stored for that number is played.
- To record or delete a message at Attendant station, all VMIB ports MUST be idle.
- When a call is transferred to the Attendant, a "Transfer to Attendant" prompt is played for the caller followed by a tone.
- If there is no recorded greeting or prompt, an pre-programmed tone is sounded instead.
- While a maximum of eight hundred user messages can be stored in the VMIB, only one hundred messages can be used for system greetings and prompts.
- If system memory fills up while a greeting/prompt is being recorded, only the segment of the greeting/prompt recorded prior to the depletion of memory is saved.
- Different system greetings can be recorded for different system groups.
- Recorded system greetings and prompts are saved at all VMIBs within the system.
- The system supports system prompts (072-100).

ADMIN PROGRAMMING

Enable VMIB Access

Use (PGM 113), then FLEX 2 … see page C-10.

Set VMIB User Record Timer

VMIB User Record Timer -- designates the maximum time a station user can record their voice mail announcement.	PGM 181 + FLEX 3 + 020 Seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 010-255

Set VMIB Valid User Message Timer

VMIB Valid User Message -- a value of 1-9 designates the minimum time that a station user must record their voice mail announcement. If value is set to 0, the voice mail announcement cannot be recorded.	PGM 181 + FLEX 4 + 4 Seconds (1 digit) + [HOLD/SAVE]	VALUES -- Range = 1-9

Set Station Group Assignment (for external analog voicemail only)

Use (PGM 190) … see page 1-100.

Set Station Group Attributes (for external voicemail only)

Use (PGM 191) … see page 1-116.

OPERATION / SETUP

To record system greetings from the System Attendant station:

1. Press [TRANS/PGM], then enter 06.
2. Enter the message number (001-070).
   If a recording exists at that message number, it will be played. Otherwise, a prompt is played: "Press the # button to record".
3. Press # to start recording.
   The "Record your message" is played followed by a confirmation tone.
4. Record the message.
   -or-
   Press * to record from an external music port on the MBU.
5. Press [HOLD/SAVE] or [SPEAKER] to finish recording.
   A confirmation tone sounds.

To delete system greetings using the System Attendant station:

1. Press [TRANS/PGM], then enter 06.
2. Enter the number of the message you want to delete (001-070).
   If a recording exists at that message number, it will be played.
3. While the message is playing, press [SPEED] to delete it.

Record User VM Greetings

If access to the VMIB is enabled, a station user can record a user greeting that will be played to callers that reach the user's voice mailbox. The user can also forward calls to the VMIB port.

CONDITIONS

- There is no time limit for recording a user greeting at a station. However -
  - When a caller leaves a voice message, the recording time is controlled by the Valid User Message Timer (preventing messages from being too short) and the VMIB User Record Timer (preventing messages from being too long) - see ADMIN PROGRAMMING.
  - When the caller's recorded message is shorter than the Valid User Message time, the message is not saved. Conversely, if the User Record Timer expires, a confirmation tone is heard, and only the portion of the message recorded prior to the tone is saved.

- If the station has several voice mail messages waiting to be retrieved, the first message to be played is the message with an associated station number. The priority of message retrieval is: Message wait with station number, then VMIB Message wait, then CLI Message wait, then VM group Message wait.
- When calling another station, if a station user presses [CALLBK] before the user greeting is played a message wait with only station number is saved at the called station - see "Message Wait and Call Back" on page 1-66.
- If all the VMIB ports are busy, a ring-back tone sounds instead of the user greeting, and the VMIB Station Forward Timer is re-started.
- Individual user greetings and VMIB Message Waits are not affected by system reset or power failure.
- While retrieving messages, the user can rewind messages as per the setting of the Rewind Message Timer - - see ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Set VMIB Message Type

VMIB Message Type -- FIFO/LIFO plays the first recorded VMIB message, or the latest message, respectively.	PGM 111 + FLEX 17 + 0 (LIFO) + [HOLD/SAVE]	VALUES -- 0 = LIFO 1 = FIFO

Enable VMIB Access

Use PGM 113, then FLEX 2 … see page C-10

Enable VMIB MSG Retrieve Password

VMIB MSG Retrieve Password -- if value is set to ON, the station user must enter a password to retrieve voice mail messages.	PGM 113 + FLEX 8 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set VMIB MSG Retrieve Date/Time

VMIB MSG Retrieve Date/Time -- if value is set to ON, date and time will be heard when voice mail messages are retrieved.	PGM 113 + FLEX 9 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set VMIB Forward No Answer Timer

Call Forward No Answer Timer -- if a value is set for no answer call forward, when the station does not answer, the call will be routed to the assigned forward destination following expiration of this timer.	PGM 181 + FLEX 1 + 015 Seconds (3 digits) + [HOLD/SAVE]	VALUES -- Range = 000-255

Set VMIB User Record Timer

Use (PGM 181), then FLEX 3 … see page C-6.

Set VMIB Valid User Message Timer

Use (PGM 181), then FLEX 4 … see page C-6.

Set VMIB Rewind Message Timer

VMIB Message Rewind Timer -- designates the amount of time the system will wait for the station user to press the [REWIND] button while listening to voice mail messages.	PGM 181 + FLEX 17 + 05 seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-99

OPERATION / SETUP

To record a user greeting at a station:

1. Press [TRANS/PGM], then enter 61.
2. Enter the appropriate message number.
   The following prompt is played: "Press the # button to record".
3. Press # to start recording.
   The "Record your message" is played followed by a confirmation tone.
4. Record the message.
5. Press [HOLD/SAVE] or [SPEAKER] to finish recording.
   A confirmation tone sounds.

To delete a user greeting at a station:

Press [TRANS/PGM], then enter 66 to delete the message, and cancel Call Forward.

To activate call forward to VMIB from a station:

See "Call Forward" on page 1-178

To leave a voice message wait at a station:

See "Message Wait and Call Back" on page 1-66

To append an existing VMIB message (7224D only):

1. While listening to a message, press the [ADD] soft button.
2. Record the appended message.
3. Press [HOLD/SAVE] to save the recording.

To rewind the current message:

Press the [REWIND] soft button to rewind the current message as per the setting of the Rewind Message Timer - see ADMIN PROGRAMMING.

Calls to Voicemail

DID Call to a Station Voice Mailbox

DID capability can be programmed for station voice mailboxes within the SBX IP 320 system.

CONDITIONS

- Once the destination of the Flexible Conversion DID table is programmed for a station 's VMIB, DID Calls are routed to the station's VMIB allowing the caller to leave a message.
- A maximum of 1000 Flexible DID Table entries can be programmed.
- Each Flexible DID Table entry has five attributes
  - DID Name
  - Day Destination
  - Night Destination
  - Weekend Destination
  - Reroute Destination
- If the Day/Night/Weekend DID destination is busy, calls are rerouted to the designated Reroute Destination designated in the DID Destination Table - see ADMIN PROGRAMMING.
- The VMIB Access option must be enabled - see ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Enable VMIB Access

VMIB Access -- if value is set to ON, the station user can use the voice mail.	PGM 113 + FLEX 2 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Set Flexible Conversion DID Destination

Use PGM 231 … see page 1-127.

Direct Transfer to VMIB

A station can be set up to transfer CO/ICM calls directly into a station's voice mailbox.

CONDITIONS

- Direct transfer to a network voice mailbox is not supported.
- VMIB Access option must be enabled - see ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Enable VMIB Access

Use PGM 113, then FLEX 2 … see page C-10

OPERATION / SETUP

To transfer the current call directly to a station's voice mailbox:

1. Press [TRANS], then [CALL BK].
2. Dial a destination station number, or press the DSS button for the appropriate station (if available).

   HINT: Also see "Mailbox Buttons".
3. Hang up to complete.

   The caller hears the recorded greeting, then the recording tone; a message can then be recorded.

E-Mail Notification of VM Messages

This feature allows a mailbox owner to receive an e-mail notification when a new message is received in their voice mailbox. E-mail Notification must be turned ON/OFF in Admin Programming on a per station basis.

The e-mail message consists of the following items:

- SBX IP system Voice Mail notification Mailbox xxx (system name, type of message, and mailbox number)
- Time (time message was left)
- Length (size of message in MM:SS format)
- CallerID (internal or external number)

EXAMPLE: E-mail Message

```
From: tsmith@vertical.com
[mailto:tsmith@vertical.com]
Sent: Friday, February 12, 2010 3:10 PM
To: Tom Smith
Subject: Voice Mail Arrived !!

 SBX IP system Voice Mail notification Mailbox 100

 Date FEB/12, Time 15:09

 Length 00:05

 CallerID : Mailbox 102
```

CONDITIONS

- E-mail notification is in addition to the message light and any outbound notification that are enabled.

ADMIN PROGRAMMING

E-mail Notification

E-mail Notification -- if value is set to ON, the station user will be notified when voicemail messages are received.	PGM 127 + FLEX 12 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Voicemail Password

Voicemail User Password -- password of e-mail server IP address.	PGM 127 + FLEX 13 + VALUES + [HOLD/SAVE]	VALUES -- max 11 digits

E-mail Server IP

SMTP Server IP -- IP address of e-mail server.	PGM 127 + FLEX 14 + VALUES (e-mail server IP address) + [HOLD/SAVE]	VALUES -- ex. -- xxx.xx.xx.xx

E-mail Address

E-mail Address -- your e-mail address.	PGM 127 + FLEX 15 + VALUES + [HOLD/SAVE]	VALUES -- max 50 characters

E-mail User ID

SMTP User ID -- user ID of e-mail server IP address.	PGM 127 + FLEX 16 + VALUES + [HOLD/SAVE]	VALUES -- max 24 characters

E-mail User Password

SMTP Password -- user password of e-mail server IP address.	PGM 127 + FLEX 17 + VALUES + [HOLD/SAVE]	VALUES -- max 24 characters

OPERATION / SETUP

To Turn On E-mail Notification:

Once turned ON in Admin Programming, press [TRANS/PGM] + 6 + 0 to enable feature.

No Answer Call (Forward) to VMIB

If an incoming CO or ICM Call to a station goes unanswered (within the predefined NO ANS TO VMIB time limit), the calls can be automatically forwarded/transferred to the station's voice mailbox.

CONDITIONS

- The NO ANS TO VMIB timer is not applied when:
  - a station is specifically set to forward calls to another station, hunt group, VMIB - "Call Forward" on page 1-178.
  - a call comes into a hunt group since hunt groups use a call flow rules/settings - see "Hunt Groups" on page 1-98.
- The No Answer to VMIB Timer, VMIB Access, and Auto Forward to VMIB options must be enabled - see ADMIN PROGRAMMING.

ADMIN PROGRAMMING

Set No Answer to VMIB Timer

Forward to VMIB Timer -- If the Auto Forward To VMIB feature (PGM 113 - FLEX 14) is set for a station, the call is automatically forwarded to voice mail after this timer expires, so the caller can leave a voice message.	PGM 181 + FLEX 20 + 20 seconds (2 digits) + [HOLD/SAVE]	VALUES -- Range = 01-60

Enable Auto Forward to VMIB

Auto Forward to VMIB -- when this value is set, a call is answered by the voice mail, when the FWD to VMIB timer expires.	PGM 113 + FLEX 14 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On (PGM 181 - F20)

Remote Control

By directly accessing their station via DID/DISA or as an intercom (ICM) caller, a station user can retrieve messages, change the user greeting and other station settings, (for example, cancel Call Forward to VMIB, etc.).

CONDITIONS

- Press * from any sub-menu to access the main menu.
- Connection will be dropped if a digit (selection) is not entered within the time set in the Inter-digit timer - see ADMIN PROGRAMMING.
- If the VMIB User Record Timer expires while a user greeting is being recorded, only the segment of the greeting that was recorded prior to the timer expiration is saved.

ADMIN PROGRAMMING

Set VMIB User Record Timer

Use PGM 181, then FLEX 3 … see page C-6.

Set Inter-digit Timer

Use PGM 181, then FLEX 8 … see page 1-150.

Set VMIB Message Rewind Timer

Use PGM 181, then FLEX 17 … see page C-9.

OPERATION / SETUP

To use Remote VMIB Control:

1. Use DID/DISA or ICM access to dial the station number.
2. While the user greeting is playing, press *.
   The "Enter your password" prompt is played.
3. Enter password (authorization code) and press # button (if authorization code is more than 5 digits, the # button is not needed) - see "Authorization Code" on page 1-20.
   A message plays that tells the user the number of messages in the mailbox.
4. Press one of the following:
   1 = retrieve voice messages
   2 = listen or change user greeting
   3 = release Call Forward to VMIB mode
   4 = exit remote VMIB Control mode

To listen to the received messages:

Follow steps 1 through 3 above.

1. Press 1 to select "retrieve voice mail messages".
   The recorded time & date and recorded message are played.
2. Press one of the following:
   1 = listen to the current message again
   2 = listen to the next message
   3 = delete the current message
   4 = delete all received messages

To change the user greeting:

Follow steps 1 through 3 above.

1. Press 2 to select "record or change user greeting".
2. While the User greeting is being played, press # to record a new user greeting.
3. Record the new user greeting.
4. Press * to save the new greeting and return to the main menu.

To cancel Call Forward:

Follow steps 1 through 3 above.

Press 3 to cancel Call Forward to VMIB.

To exit VMIB Control mode:

Press * in the main menu of Remote VMIB control mode.

Return Call Using CLI (8224D phones only)

When an outside caller leaves a message, the CLI is saved with message. When the message is played, the CLI is displayed. The user can then use the CLI on the display to return the call.

CONDITIONS

- This feature is only available for 8224D model phones.
- The voice mail message and associated CLI are not deleted when the Callback feature is activated.

OPERATION / SETUP

To return a call using the CLI associated to a message:

Press the [CALLBACK] soft button.

The system dials the displayed CLI automatically.

Mailbox Buttons

This feature allows station users to assign voicemail (VM) buttons to specific station voice mailboxes within the system.

Setting Up a Mailbox Button

CONDITIONS

- Buttons can be set up for the following functions for a user to:
  - access their own station's voice mail box to check a new or saved message.
  - check for messages in, or transfer a caller directly to another mailbox in the system.
- Multiple Mailbox Buttons are only supported for VMIB. When VMIB is installed, each digital or IP phone can have as many Mailbox Buttons programmed as there are available Flex buttons on the phone (that is, 24 or 8 depending on the phone type).
- Multiple mailbox buttons are not available when external analog voice mail is used.
- When a message is left in a station’s mailbox, the corresponding Mailbox Button LED flashes at the rate of 1 flash per 1000 ms.
- The VMIB Access option must be enabled for each station for which a Mailbox Button is programmed - see ADMIN PROGRAMMING.
- Mailbox Flex buttons keys can only be programmed on digital phone.

ADMIN PROGRAMMING

Enable VMIB Access

Use PGM 113, then FLEX 2 … see page C-10

OPERATION / SETUP

To program a Mailbox Button at a Flex button (digital phones only):

1. Press [TRANS/PGM], then the flex button to be assigned.
2. Press [TRANS/PGM], then 47.
3. Enter the station number for which a Mailbox Button is being programmed.
4. Press [HOLD/SAVE] to store the setting.

To program a Mailbox Button for a Virtual Mailbox:

1. Press [TRANS/PGM], then the flex button to be assigned.
2. Enter the virtual mailbox number (200-249).
3. Press [HOLD/SAVE] to store the setting.

To retrieve a voice mail message:

Press the Mailbox Button that corresponds to the mailbox to be checked.

HINT: When a message is left in a station's mailbox, the corresponding Mailbox Button LED flashes.

To transfer a caller directly to a station's voice mailbox:

1. Press the Mailbox Button that corresponds to the station's mailbox to which the current call is to be transferred.
2. Hang up to complete the transfer.

   The caller hears the recorded greeting, then the recording tone; a message can then be recorded.

Messages

Copy Messages to Another Mailbox (Cascading)

Message cascading is a feature that copies messages left for the originating mailbox to another mailbox. Once the message is moved into the other mailbox, notification events can take place based on that mailbox settings.

CONDITIONS

- A mailbox can only have 1 cascade mailbox destination.
- Mailbox messages are retained in each mailbox.

ADMIN PROGRAMMING

Set Cascade Destination

Cascade Destination -- based on the destination selected, the mailbox owner can copy voice mail messages to another station (or virtual) mailbox.	PGM 127 + FLEX 10 + F1 (Station and sta no.) + [HOLD/SAVE]	VALUES -- F1 = Station (xxx) F2 = Virtual (xxx)

Assign Cascade Type

Cascade Type -- if value is set to Off (1), the function is disabled. Other options are: • Immediately - cascading begins immediately, allowing storage of duplicate messages in several mailboxes. • When Notify Fails - forwards the message to another mailbox only when the notification fails and the mailbox owner has not retrieved the message. • Urgent Only - cascades only those messages marked urgent.	PGM 127 + FLEX 11 + VALUES (F1-4) + [HOLD/SAVE]	VALUES -- 1 - NO cascading (default) 2 - Immediately 3 - When notification fails 4 - Urgent only

Forward Messages to Another Mailbox

This feature allows a mailbox owner to forward a message to another mailbox.

CONDITIONS

- For 2-hour version of VMIB:

  Forwarding a message from one mailbox to another results in the message being automatically deleted from the original mailbox.
- For 8-hour version of VMIB:

  Forwarding a message to another mailbox does not automatically delete the message from the original mailbox. The user can decide whether to save or delete the message after it is forwarded.

OPERATION / SETUP

For external VMIB access:

1. A user can press 6 to forward the current message that is playing.
2. Then the "To forward this message, enter the mailbox number" prompt plays.
3. Once the mailbox number is entered, the "Message has been forwarded to X *(where X is the mailbox number)*" prompt is played.

The existing prompts are:

- "To hear the current message, press 1"
- "To hear the next message, press 2"
- "To delete the current message, press 3"
- "To reply to the current message, press 5"
- "To forward the current message, press 6"
- "For the main menu, press *"
- "Please enter the mailbox number"
- "To forward this message, enter the mailbox number"
- "Message has been forwarded to X *(where X is the mailbox number)*"

Forward Messages to AA & Rerouting to Another Station

Unanswered incoming CO calls can be forwarded to the Auto Attendant with an VMIB announcement, then rerouted to another station using CCR (see page 1-120).

CONDITIONS

- If the Attendant station does not answer an incoming call before the No Answer Timer expires, the call is forwarded to the Auto Attendant. The caller then hears a VMIB message, and can then be rerouted to another user using CCR (see page 1-120).
- This feature is not available for ringback and transferred calls.
- CO ringing MUST be assigned to the Attendant only.

ADMIN PROGRAMMING

Activate Auto Attendant

Auto Attendant Usage -- if value is set to ON, Auto Attendant is activated.	PGM 165 + FLEX 1 + 0 (Off) + HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set Auto Attendant VMIB Announce Number

VMIB Announce -- this value is the number of VMIB announcements played when Auto Attendant is activated	PGM 165 + FLEX 2 + VMIB Announcement (Value) + [HOLD/SAVE]	VALUES -- Range = 00-70

Reply to Messages

This feature allows a user to immediately respond to a currently playing message left by another station in the system. The user can press a soft button or a DTMF button to reply to the internal station that left the message.

CONDITIONS

- A user can only reply to a message from another station within the same or networked system. If an attempt is made to reply to a message from an external caller, the "Not available" prompt is played.

Using a 24-button digital phone or IP phone

- While listening to a message, use the right NAV button to scroll to the Reply option, then press the corresponding soft button to reply to the currently playing message.
- The user greeting of the user that left the original message plays, and a prompt allows the user to record a response.

Using any phone

- The Reply to Message feature will be available to all callers logged into their mailbox, using any of the following access methods:
  - ICM: digital phone 8 btn; digital phone 24 btn; SLT (all types); IP phone (all types)
  - CO caller: Any CO call on any line type including SIP & Analog
  - Networked caller: Any net call from any phone
- During or after playing a message, the user can press #5 to reply to the message.
- If the message is from an internal station, the user is transferred to that station's mailbox.

Transfer Messages

A voice mail message at one station may be transferred to another station.

CONDITIONS

- This feature is available on SLT phones with a MSG Wait LED.
- The transferred station must have VMIB access.
- A user can add a comment to a message before it is transferred (7224D only).
- The VMIB Access option must be enabled at both the transferring and transfer-to stations.

ADMIN PROGRAMMING

Enable VMIB Access

Use PGM 113, then FLEX 2 … see page C-10

OPERATION / SETUP

To transfer a message to the other station:

While listening to a message, dial the station number to be transferred to. The message will be transferred to the station.

Outcall Notification

A prompt will play when the system contacts the outcall party: "This is the SBX IP system, there is a message for [mailbox xxx]". If the system cannot reach the notification party after the specified number of attempts, the system will consider the notification failed.

CONDITIONS

- The Outcall Notification parameters set up by the station user (enable feature, notify attempts, and retry intervals) will override those entered by the System Administrator.

ADMIN PROGRAMMING

Outbound Notification

Outbound Notification -- if value is set to ON, the mailbox will perform outcall notification when a message is received.	PGM 127 (VMON) + FLEX 9 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Outbound Notification CO Group

Outbound Notification CO Group -- determines what CO group will be used when placing an outcall notification. Default is group 1.	PGM 127 (VMON) + FLEX 10 + Value + [HOLD/SAVE]	VALUES -- 1-24

Outbound Notification Tel. number

Outbound Notification Tel. Number -- this is the telephone number that will be called when the mailbox receives a message.	PGM 127 (VMON) + FLEX 11 + Value + [HOLD/SAVE]	VALUES -- up to 24 digits

Outbound Notification Retry

Outbound Notification Retry -- determines how many times the system will retry the notification in the event of a failure.	PGM 127 (VMON) + FLEX 12 + Value + [HOLD/SAVE]	VALUES -- 1-9

Outbound Notification Interval

Outbound Notification Interval -- determines the interval in between notification attempts in the event of a failure.	PGM 127 (VMON) + FLEX 13 + Value + [HOLD/SAVE]	VALUES -- 1-60 minutes (default = 3)

OPERATION / SETUP

To apply Outcall Notification settings

Press TRANS/PGM 68 and select one of the following when prompted:

- 1 to enable or disable the Outbound Notification feature.
- 2 for the number of attempts you wish to allow,1-9.
- 3 for the interval between the retries, 01-60 (minutes).

Two-way Record

Feature allows a station to record a conversation. The recording is stored in the user's mailbox.

Recording via SMDI

CONDITIONS

- A Record Flex button must be programmed at the station.
- When the recording feature is activated, the {RECORD} button LED flashes at 240 ipm.
- The recording feature is not available for:
  - SLT phones
  - intercom calls
  - DTMF
- The recording feature is canceled when station goes off-hook, presses the {RECORD} button a second time, presses [FLASH], or if the CO party hangs up.
- This feature is available in the SMDI mode only.
- If the system has a VMIB, the conversation are saved in the VMIB.
- If Pole 3 of DIP SW1 of the MBU is set to OFF (down position), and the system has VMIB, the conversations are saved to the VMIU.

- Protocol: When the user presses the {RECORD} button, the system sends an SMDI message to Voice Mail PC through a RS-232C serial cable.

  The format is as follows:

  =>"crlfMD0010mmmmH0xxxxxxxxxbbcrlf^Y"

  cr : carriage return

  lf : line feed

  mmmm : VM port number

  H : Action code for recording

  xxxxxxxxx : extension which try to record

  b : ascii space

ADMIN PROGRAMMING

Enable Two Way Recording

Two-way Record -- if value is set to ON, the station user can record the incoming and outgoing conversation.	PGM 112 + FLEX 10 + 0 (Off) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

OPERATION / SETUP

To program a {RECORD} flex button:

1. Press [TRANS/PGM], then the Flex button to be assigned.
2. Press [TRANS/PGM], then enter 54.
3. Press [HOLD/SAVE] to store the setting.

To record a conversation:

During a conversation with a CO line caller, press {RECORD} to initiate recording.

The recording is saved to the user's mailbox.

To cancel/stop recording during a conversation:

Press {RECORD} again or hang up to end the recording.

Recording via VMIB

CONDITIONS

- A Record Flex button must be programmed at the station.
- The recording feature is not available for:
  - SLT phones
  - Intercom calls
- The recording feature is canceled when station goes off-hook, presses the {RECORD} button a second time, presses [FLASH], or if the CO party hangs up.
- When the recording feature is activated, the {RECORD} button LED flashes at 240 ipm.
- Not available for intercom call recording.
- If the system has an external voice mail system, the conversation is saved to that external voice mail system.

ADMIN PROGRAMMING

Enable Two Way Recording

Use PGM 112, then FLEX 10 … see page C-24.

OPERATION / SETUP

See Operation/Set up for SMDI above.

Virtual Mailboxes

This feature provides a way to assign mailboxes in the system database that do not have physical stations associated with them. They function as regular mailboxes in the system.

- By default, extensions 200-249 are the default virtual mailboxes. A virtual mailbox is simply a voice mailbox that does not have a digital/IP/SLT extension associated with it.
- Callers can be routed to the mailbox and users can access the mailbox via mailbox buttons. It is very useful for call routing/message taking applications where there is a need for a mailbox but not an associated telephone.

CONDITIONS

- Virtual mailboxes may be assigned as a flex button via the mailbox button feature.
- Virtual mailboxes do not decrease station capacity.

- For virtual mailboxes, Outcall Notification is not supported (LCR and Toll check does not apply).

  NOTE: This feature should not be confused with Outbound Nofification which is similiar, however, Outcall Nofification must be set up by the Administrator.

- Virtual mailboxes have the same administrative parameters as a normal mailbox. These parameters are described in the Admin Programming section below.

ADMIN PROGRAMMING

Enable Admin Rights

Admin Rights-- if value is set to ON, a mailbox user will be granted access to the administrator menu [9] in their mailbox.	PGM 129 + FLEX 1 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

VMIB Access

VMIB Access -- if value is set to ON, the station user can use the voice mail.	PGM 129 + FLEX 2 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

COS (1-5)

COS (1-5) -- assigns one of the five COS settings to the mailbox. The default is COS 1.	PGM 129 + FLEX 3 + 1 (COS) + [HOLD/SAVE]	VALUES -- 1-5

Announce Only

Announce Only -- if value is set to ON, the mailbox will play its greeting and then perform the announce only action.	PGM 129 + FLEX 4 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Set Announce Only Action

Announce Action -- if value is set to ON, the station user can send the caller to the previous VM menu. If set to Hang Up, the mailbox will play its greeting and then terminate the call.	PGM 129 + FLEX 5 + 1 (Values) + [HOLD/SAVE]	VALUES -- 0 = Hang-up 1 = Previous Menu

VMIB MSG Password

VMIB MSG Password -- if value is set to ON, the virtual mailbox owner must enter a password to retrieve voice mail messages.	PGM 129 + FLEX 6 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

VMIB MSG time

VMIB MSG Time -- if if value is set to ON, the time will be heard when voice mail messages are retrieved.	PGM 129 + FLEX 7 + 1 (On) + [HOLD/SAVE]	VALUES -- 0 = Off 1 = On

Set VMIB MSG type

VMIB MSG Type -- FIFO/LIFO plays the first recorded VMIB message, or the latest message, respectively	PGM 129 + FLEX 8 + 1 (FIFO) + [HOLD/SAVE]	VALUES -- 0 = LIFO 1 = FIFO

Outbound Notification

Outbound Notification -- if value is set to ON, the mailbox will perform outcall notification when a message is received.	PGM 129 (VMON) + FLEX 9 + 1 (Enable) + [HOLD/SAVE]	VALUES -- 0 = Disable 1 = Enable

Outbound Notification CO Group

Outbound Notification CO Group -- determines what CO group will be used when placing an outcall notification. Default is group 1.	PGM 129 (VMON) + FLEX 10 + Value + [HOLD/SAVE]	VALUES -- 1-24

Outbound Notification Tel. number

Outbound Notification Tel. Number -- this is the telephone number that will be called when the mailbox receives a message.	PGM 129 (VMON) + FLEX 11 + Value + [HOLD/SAVE]	VALUES -- up to 24 digits

Outbound Notification Retry

Outbound Notification Retry -- determines how many times the system will retry the notification in the event of a failure.	PGM 129 (VMON) + FLEX 12 + Value + [HOLD/SAVE]	VALUES -- 1-9

Outbound Notification Interval

Outbound Notification Interval -- determines the interval in between notification attempts in the event of a failure.	PGM 129 (VMON) + FLEX 13 + Value + [HOLD/SAVE]	VALUES -- 1-60 minutes (default = 3)

Set Cascade Destination

Cascade Destination -- if value is set to 1, cascade messaging can be set to go to another mailbox (station), or 2 to be set to a virtual mailbox.	PGM 129 + FLEX 14 + F1 (Value) + [HOLD/SAVE]	VALUES -- F1 = Station (xxx) F2 = VMB (xxx)

Assign Cascade Type

Cascade Type -- if value is set to Off (0), the function is disabled. Other options are: • Immediately - cascading begins immediately, allowing storage of duplicate messages in several mailboxes. • When Notify Fails - forwards the message to another mailbox only when the notification fails and the mailbox owner has not retrieved the message. • Urgent Only - cascades only those messages marked urgent.	PGM 129 + FLEX 15 + Value (F0-F3) + [HOLD/SAVE]	VALUES -- 0 - NO cascading (default) 1 - Immediately 2 - When notification fails 3 - Urgent only

E-mail Notification

E-mail Notification -- if value is set to ON, the station user will be notified when voicemail messages are received.	PGM 129 + FLEX 16 + 0 (On) + [HOLD/SAVE]	VALUES -- 0 = On 1 = Off

Voicemail Password

Voicemail User Password -- password of e-mail server IP address.	PGM 129 + FLEX 17 + Value + [HOLD/SAVE]	VALUES -- max 11 digits

E-mail Server IP

SMTP Server IP -- IP address of e-mail server.	PGM 129 + FLEX 18 + Value (e-mail server IP address) + [HOLD/SAVE]	VALUES -- ex. -- xxx.xx.xx.xx

E-mail Address

E-mail Address -- enter your e-mail address (your name@your company.com) using the same method as entering a name on the telephone: EX: 21 = A, 22 =B. etc.	PGM 129 + FLEX 19 + Value + [HOLD/SAVE]	VALUES -- max 50 characters

E-mail User ID

SMTP User ID -- user ID of e-mail server IP address. EX: vertical\tsmith NOTE: must be entered in PC Admin.	PGM 129 + FLEX 20 + Value + [HOLD/SAVE]	VALUES -- max 24 characters

E-mail User Password

SMTP Password -- the first 3 characters of the password are displayed.	PGM 129 + FLEX 21 + Value + [HOLD/SAVE]	VALUES -- max 24 characters

First Name

First Name -- For first name entries, you program the name using the same method as entering a name on the telephone: EX: 21 = A, 22 =B. etc.	PGM 129 + FLEX 22 + Value + [HOLD/SAVE]	VALUES -- max 12 characters

Last Name

Last Name -- For last name entries, you program the name using the same method as entering a name on the telephone: EX: 21 = A, 22 =B. etc.	PGM 129 + FLEX 23 + Value + [HOLD/SAVE]	VALUES -- max 12 characters

Voice Mailbox COS

The system provides administrative options to create COS for voice mailboxes. These COS can then be programmed to stations/mailboxes on an individual basis. Up to 5 COS may be programmed.

CONDITIONS

- The default Class of Service for all mailboxes is 1.
- The parameters in COS 1 contain all default settings.

ADMIN PROGRAMMING

Set Mailbox COS

Voice Mailbox COS -- an individual class of service may be set up to define the permissions an extension or group of extensions will have.	PGM 238 + VALUE (1-5) + FLEX (1-8) + [HOLD/SAVE]	VALUES -- COS 1-5 (default = 1)

Assign Mailbox COS Parameters

Voice Mailbox COS Settings -- different mailbox parameters may be set up for each class of service (1-5) and assigned to each mailbox individually.	PGM 238 + COS (1-5) + FLEX (1-8) + [HOLD/SAVE]	VALUES -- FLEX 1-8: 1 -Greeting length (00-99 secs) default 15 2 - Message record time (001-600 secs) default 300 3 - Number of messages (01-250) default 50 4 - Message retention time (01-99 days) default 15 5 - E-mail notification (Enable/Disable) default Disable 6 - Future delivery message (Enable/Disable) default Disable 7 - Confirm message receipt (Enable/Disable) default Disable 8 - Private messge mark (Enable/Disable) default Enable

Voice Mail Dialing Table

The Voice Mail Dialing Table defines the interface for dialing between the SBX IP 320 and the external VM device. In this program mode, the following items can be customized:

Press the [TRANS/PGM] button, dial 234., and follow the specific procedure:

Voice Mail Dialing Table --	PGM 234 + VALUE1 + VALUE2 + Prefix/Suffix Code (up to 12 digits) + [HOLD/SAVE]	VALUE1: 1-9 (VM Default Table) VALUE2: 1 = Prefix 2 = Suffix

VM DESIGNATION (VALUE 1)		DESCRIPTION	DEFAULT (VALUE 2)
1	VM Table 1	Put Mail	Prefix: P# Suffix: -
2	VM Table 2	Get Mail	Prefix: P## Suffix: -
3	VM Table 3	Busy Table	Prefix: P#*3P Suffix: -
4	VM Table 4	No Answer Table	Prefix: P#*4P Suffix: -
5	VM Table 5	Error Table	Prefix: P#*5P Suffix: -
6	VM Table 6	DND Table	Prefix: P#*6P Suffix: -
7	VM Table 7	-	Prefix: Suffix: -
8	VM Table 8	-	Prefix: Suffix: -
9	VM Table 9	Disconnect Table	*****

Quick Reference - Programming Tables

This appendix contains the following system programming tables for Quick Reference navigation through the SBX IP Programming & Operations Guide:

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Admin Programming Codes

Pre-Programmed System Values

PRE-PROGRAMMED

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
100	1	Location Nation Code	see… SBX IP Install Guide	max. 4 digits	82
	2	Customer Site Name		max. 24 digits	-
101	-	Slot Assignment - *If Switch 4 is ON*, system will auto-detect board type. - *If Switch 4 is OFF*, board type must be entered at each slot., then reset system. NOTE: PRIB assignment - it is possible to program a logical port number.		STA Board type codes SLIB16 = 13 SLIB8 = 14 HYBRID = 17 COL Board type codes PRI = 31 LCOB3 = 33 DCOB = 40 VOIB (E1) = 41 T1 = 50 Other Board type codes VMIB = 64	-
-	-	Logical Slot Assignment		-	-
103	1	COL Board		-	-
-	2	STA Board		-	-
-	3	VMIB		-	-
104		Numbering Plan Type Number Set Type 1 (Basic type: 1st digit of Sta No. s/b 1-4)		-	Type 1
-	-	Number Set Type 2 (Sta No. can be changed within 799)		-	Type 1
-	-	Number Set Type 3		-	Type 1
-	-	Number Set Type 4		-	Type 1
-	-	Number Set Type 5		-	Type 1
-	-	Number Set Type 6		-	Type 1
-	-	Number Set Type 7		-	Type 1
-	-	Number Set Type 8 (Sta No. can be changed within 999)		-	Type 1

PRE-PROGRAMMED

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
105	-	Flexible Numbering Plan Station Number	D-3	sets 1-8	none
106	1-21	Plan A	D-3	sets 1-8	none
107	1-19	Plan B	D-4	sets 1-8	none
108	 1	IP Setting IP Name	see… SBX IP Install Guide	 max. 15 digits	 -
-	2	Server IP Address		12 digits (Skip: #)	192.168.1.1
-	3	CLI IP Address		12 digits	-
-	4	Gateway Address		12 digits	-
-	5	Subnet Mask		12 digits	255.255.255.0
-	6	PPP Usage		On/Off	-
109	-	Flexible Numbering Plan - Plan C	D-5	sets 1-8	none
110	 1	Station ID Station ID Assignment	D-6	 01-14	 -
-	2	DSS/DLS Map - Associate Sta		02-04	-
-	3	Company Directory First Name		-	-
-	4	Company Directory Last Name		-	-

Details for Pre-Programmed Codes 105 thru 109

PGM	FLEX	FIELD	SET1	SET2	SET3	SET4	SET5	SET6	SET7	SET8
105	-	Intercom Call	100-147	100-147 (100 -799)	100-147	700-747	200-247	21-68	100-147	100-147 (100-999)
106	1	Grp Pilot Number	620-629	*620 -*629	620-629	620-629	620-629	*620-*629	620-629	*620-*629
-	2	Int Page Zone	501-510	*501-*510	#01-#10	#01-#10	#01-#10	*501-*510	401-410	*501-*510
-	3	Int All Call Page	543	*543	#5	#7	#5	*543	43	*543
-	4	Meet Me Page	544	*544	##	##	##	*544	44	*544
-	5	Ext Page Zone 1	545	*545	#6	#41	#6	*545	45	*545
-	6	All Call Page (Int & Ext)	549	*549	#00	#6	#00	*549	49	*549
-	7	SMDR Account Code Enter - SLT	550	*550	550	91	50	*550	50	*550

PGM	FLEX	FIELD	SET1	SET2	SET3	SET4	SET5	SET6	SET7	SET8
106	8	Flash Command to CO Line - SLT	551	*551	551	551	51	*551	51	*551
-	9	Last Number Redial - SLT	552	*552	552	552	52	*552	52	*552
-	10	DND Toggle On/Off - SLT	553	*553	553	553	53	*553	53	*553
-	11	Call Fwd - SLT	554	*554	554	554	54	*554	54	*554
-	12	Speed Dial Prog - SLT	555	*555	555	*40	55	*555	55	*555
-	13	Msg Wait/ Callback Enable	556	#556	556	566	56	#556	56	#556
-	14	Msg Wait/Callbck Return - SLT	557	#557	557	567	57	#557	57	#557
-	15	Speed Dial Access - SLT	558	*558	558	*9	58	*558	58	*558
-	16	Canc DND/Fwd/ PreMsg - SLT	559	*559	559	559	59	*559	59	*559
-	17	SLT Hold	560	*560	560	560	690	*560	30	*560
-	18	*Reserved*	-	-	-	-	-	-	-	-
-	19	*Reserved*	-	-	-	-	-	-	-	-
-	20	Prog Mode Enter Code - SLT	563	*563	563	563	693	*3	33	*3
-	21	ACD Reroute	564	*564	564	564	694	*4	34	*4
107	1	Alarm Reset	565	*565	565	*565	695	*565	35	*565
-	2	Grp Call Pickup	566	*566	**	*1	**	*566	36	*566
-	3	UCD DND	568	*568	568	568	698	*568	68	*568
-	4	Night Answer	569	*569	577	2	699	*569	69	*569
-	5	Call Parking Locations	601-610	601-610	601-610	601-610	601-610	601-610	601-610	601-610
-	6	Direct Call Pickup	7	*7	*7	*42	7	*7	7	*7
-	7	CO Line Group Access	801-824	801-824	801-824	401-424	801-824	801-824	801-824	#801-#824
-	8	Individual CO Access	8801-8836	8801-8836	8801-8836	4801-4836	8801-8836	8801-8836	8801-8836	#8801-#8836
-	9	*Reserved*	-	-	-	-	-	-	-	-

PGM	FLEX	FIELD	SET1	SET2	SET3	SET4	SET5	SET6	SET7	SET8
107	10	Retrieve Held CO Line	8*	8*	8*	4*	8*	8*	8*	#8*
-	11	Retrieve Held Ind CO Line	8#xx	8#xx	8#xx	4#xx	8#xx	8#xx	8#xx	#8#xx
-	12	Access CO Line (1st avl COL Grp)	9	9	9	1	0	9	9	0
-	13	Attendant Call	0	0	0	0	9	0	0	#9
-	14	1st Door Open	#*1	#*1	#*1	#*1	#*1	#*1	*1	#*1
-	15	2nd Door Open	#*2	#*2	#*2	#*2	#*2	#*2	*2	#*2
-	16	3rd Door Open	#*3	#*3	#*3	#*3	#*3	#*3	*3	#*3
-	17	4th Door Open	#*4	#*4	#*4	#*4	#*4	#*4	*4	#*4
-	18	VM Msg Wait - En	*8	*8	*8	*8	*8	*8	*8	*8
-	19	VM Msg Wait - Dis	*9	*9	*9	*9	*9	*9	*9	*9
109	1	*Reserved*	-	-	-	-	-	-	-	-
-	2	*Reserved*	-	-	-	-	-	-	-	-
-	3	*Reserved*	-	-	-	-	-	-	-	-
-	4	Conf Room	57	*57	*57	57	*57	*57	*57	*57
-	5	SLT Conference Page Join	58	*58	*58	58	*58	*58	*58	*58
-	6	Unsupervised Conf Timr Extend	##	##	*##	*##	*##	##	##	##
-	7	Remote MEX Control	#1	-	-	-	-	-	-	-

Feature Default Values

STATION

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
110	-	Station ID	-	-	-
-	1	Station ID Assignment	1-17	01-14	-
-	2	DSS/DLS Map - Associated Station	1-17	02-04	-
-	3	Company Directory First Name	1-44	-	-
-	4	Company Directory Last Name	1-44	-	-
111	-	Station Attributes 1	-	-	-
-	1	Auto Speaker Selection	1-78	On/Off	On
-	2	Call Forward	1-178	On/Off	On
-	3	DND	1-50	On/Off	On
-	4	Data Line Security	1-47	On/Off	Off
-	5	Howling Tone (SLT)	1-214	On/Off	On
-	6	ICM Box Signaling	1-95	On/Off	Off
-	7	No Touch Answer	1-186	On/Off	On
-	8	Page Access	1-175	On/Off	Off
-	9	Ring Type		0-4	0
-	10	Speaker Ring	1-60	1: Speaker 2: Headset 3: Both	Speaker-Phone
-	11	Speakerphone	1-60	On/Off	On
-	12	VMIB Slot	n/a	-	*only 1 slot used*
-	13	ICM Group	1-65	1-5	1
-	14	Error Tone for Telephone Answering Device (TAD)	1-214	On/Off	Off
-	15	SLT Flash Drop	1-214	0: Disable 1: Flash Drop 2: Flash Ignore 3: Hold Release	Disable
-	16	Loop LCR Account Code	1-21	On/Off	Off
-	17	VMIB Message Type	C-8	FIFO/LIFO	LIFO
-	18	Off-net Call Forward	1-180	Enable/Disable	Enable
-	19	Forced Hands-free	1-59	On/Off	Off

STATION

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	20	*Reserved*	-	-	-
-	21	*Reserved*	-	-	-
-	22	Caller Voice Over	1-86	On/Off	Off
-	23	SIP User ID Table Bin	B-16	00-32	00
-	24	Listen Redial DTMF	1-214	On/Off	On
112	-	Station Attributes 2	-	-	-
-	1	CO Warning Tone	1-215	On/Off	Off
-	2	Automatic Hold	1-188	On/Off	On
-	3	CO Call Time Restriction	1-152	On/Off	Off
-	4	Ind CO Line Access	1-215	Enable/Disable	Enable
-	5	CO Line Queuing	1-153	Enable/Disable	Enable
-	6	CO PGM	1-57	Enable/Disable	Disable
-	7	PLA	1-134	Enable/Disable	Enable
-	8	Prepaid Call	1-215	On/Off	Off
-	9	Speed Dial Access	1-171	Enable/Disable	Enable
-	10	Two Way Record	C-24	On/Off	Off
-	11	Fax Mode	1-215	On/Off	Off
-	12	OFFNET Call Mode	1-180	EXT/ALL	All
-	13	UCD Group Service	1-215	On/Off	Off
-	14	Ring Group Service	1-215	On/Off	Off
-	15	Stop Camp On Tone	1-39	Enable/Disable	Disable
-	16	Line Length	n/a	Short/Long/Far	Short
-	17	MSG Scroll Speed	n/a	0-7	3
-	18	Block Back Call for SLT	1-216	On/Off	Off
-	19	I-TIME RST	1-216	On/Off	Off
-	20	STA Account	1-22	On/Off	Off
-	21	*Reserved*	-	-	-
-	22	Door Open	1-216	Enable/Disable	Enable
-	23	Dummy Station	1-62	On/Off	Off
-	24	Emergency Supervisor	1-52	On/Off	Off

STATION

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
113	-	Station Attributes 3	-	-	-
-	1	Admin	1-3	Enable/Disable	Disable
-	2	VMIB Access	C-6	Enable/Disable	Enable
-	3	Group Listening	1-216	Enable/Disable	Disable
-	4	Override Privilege	1-9	Enable/Disable	Disable
-	5	SMDR Hidden Dialed Digits	1-216	Enable/Disable	Disable
-	6	Voice Over	1-40	Enable/Disable	Disable
-	7	Warm Line	1-155	Hot/Warm	Warm
-	8	VMIB MSG Retrieve Password	C-8	On/Off	Off
-	9	VMIB MSG Retrieve Date/Time	C-8	On/Off	On
-	10	Alarm Attribute	1-216	On/Off	Off
-	11	Mute Ring Service	1-216	On/Off	On
-	12	Call Cut Off Timer	1-152	00-99	00
-	13	Barge In Mode	1-35	0-2	0
-	14	Auto Forward to VMIB	C-10	On/Off	On
-	15	Station Port Block	1-83	On/Off	Off
-	16	P-MSG DND	1-51	On/Off	Off
-	17	Park and Page	1-191	On/Off	Off
-	18	Call Coverage	1-216	On/Off	Off
-	19	DND - Fwd to VM	1-50	On/Off	On
-	20	Back Light	1-216	On/Busy/Off	Off
114	-	Station Attributes4	-	-	-
-	1	CLIP LCD Display	1-138	On/Off	On
-	2	COLP LCD Display	1-217	On/Off	Off
-	3	CLI/REDIRECT Display	1-217	CLI/REDIRECT	CLI
-	4	CLI MSG Wait	1-139	On/Off	Off
-	5	EXT or CO ATD	1-217	ATD/EXT	EXT
-	6	Keypad Facility	1-217	Keypad/DTMF	DTMF
-	7	Long/Short	1-217	Long/Short	Short
-	8	CPN Type	1-217	0-2	0
-	9	SO Sub-address	1-217	0-2	*not used*

STATION

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	10	DISA Restriction	1-133	On/Off	Off
-	11	CLI Name Display	1-138	On/Off	Off
-	12	ISDN CLI Station Number	1-140	max. 4 digits	-
-	13	Progress Indication	1-217	On/Off	Off
-	14	ISDN CLIR	1-141	On/Off	Off
-	15	ISDN COLR	1-218	On/Off	Off
-	16	DID Restriction	1-126	On/Off	Off
-	17	DID Call Wait	1-126	On/Off	Off
-	18	CLI Type	1-218	Long/Short	Short
-	19	Long Station CLI	1-218	Logical Sta # max. 12 digits	-
-	20	MSN Call Wait	n/a	On/Off	Off
-	21	Long CLI 1	1-218	max. 16 digits	-
-	22	Long CLI 2	1-218	max. 16 digits	-
-	23	Collect Cal Blocking	1-218	On/Off	On
115	-	Flex Button Assignment	1-55	Flex 01-44	-
-	-	01: User Key		-	-
-	-	02: {CO} Button		01-12	-
-	-	03: {CO Line Group} Button		01-24	-
-	-	04: {LOOP} Button		-	-
-	-	05: {STA xxx} Button		Sta No.	-
-	-	06: STA PGM Button		11-99	-
-	-	07: {STA SPD xxx} Button		Sta Spd Bin No.	-
-	-	08: {SYS SPD xxxx} Button		Sys Spd Bin No.	-
-	-	09: FLEX NUM		Num Plan Code	-
-	-	10: Networking DSS Button		Networking No.	-
-	-	11: MSN Button		-	-
116	-	Station COS	-	-	-
-	1	Station COS : Day	1-26	1-9	1
-	2	Station COS : Night	1-26	1-9	1
117	-	CO Line Group	1-151	01-24	-

STATION

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
118	1-5	Internal Page Zone Access	1-175	Zone 01-05	01
119	1-5	Conference Page Zone Access	1-93	Zone 06-10	-
120	-	ICM Tenancy Group	-	-	-
-	1	ICM Tenancy Group Attendant	1-221	Sta No.	-
-	2	ICM Tenancy Access Group	1-66	1-5	Group 1
121	-	Call Forward Preset	1-183	-	-
122	-	Idle Line Selection	-	-	-
-	-	1: Flex Button	1-155	01-44	-
-	-	2: CO Line	1-155	01-12	-
-	-	3: CO Line Group	1-155	01-24	-
-	-	4: Station	1-155	100-131	-
124	-	SMDR Account Group Assign	1-218	00-23	00 (*not assigned*)
125	-	Copy DSS Button	-	01-05	-
-	1	Copy DSS to Station	1-219	-	-
-	2	Copy DSS to ICM Group	1-219	-	-
126	-	Station IP List	1-219	01-48 (bin number)	-
127	-	Station Mailbox Attributes	-	-	-
-	1	Admin	C-2	Enable/Disable	Disable
-	2	COS (1-5)	C-2	1-5	1
-	3	Announce Only	C-4	Enable/Disable	Disable
-	4	Announce Action	C-4	Hang-up/Previous	Previous
-	5	Outbound Notification	C-22	Enable/Disable	Previous
-	6	Outbound Notification CO Group	C-22	1-24	1
-	7	Outbound Notification Tel. Number	C-22	phone number	none
-	8	Outbound Notification Retry	C-22	1-9	2
-	9	Outbound Notification Interval	C-23	1-60 mins	3
-	10	Cascade Destination	C-28	Station/Vir. Mbox	none
-	11	Cascade Type	C-28	NO cascading/ Immediately/When noti. fails/Urgent only	NO cascading
-	12	E-mail Notification	C-28	On/Off	Off

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
STATION	127	13	Voicemail Password	C-29	max 11 digits	none
	-	14	SMTP Server IP	C-29	Ex: xxx.xx.xx.x.	none
	-	15	E-mail Address	C-29	max 50 characters	none
	-	16	SMTP User ID	C-29	max 24 characters	none
	-	17	SMTP Password	C-29	max 24 characters	none
	129	-	Virtual Mailbox Attributes	-	-	-
	-	1	Admin	C-26	Enable/Disable	Disable
	-	2	VMIB Access	C-26	Enable/Disable	Disable
	-	3	COS (1-5)	C-26	1-5	1
	-	4	Announce Only	C-26	Enable/Disable	Disable
	-	5	Announce Action	C-26	Hang-up/Previous	Previous
	-	6	VMIB Msg Password	C-27	On/Off	Off
	-	7	VMIB MSG Time	C-27	On/Off	Off
	-	8	VMIB MSG Type	C-27	LIFO/FIFO	LIFO
	-	9	Outbound Notification	C-27	Enable/Disable	Disable
	-	10	Outbound Notification CO Group	C-27	1-24	1
	-	11	Outbound Notification Tel. Number	C-27	phone number	none
	-	12	Outbound Notification Retry	C-28	1-9	2
	-	13	Outbound Notification Interval	C-28	1-60 mins	3
	-	14	Cascade Destination	C-28	Station/Vir. Mbox	none
	-	15	Cascade Type	C-28	NO cascading/ Immediately/When noti. fails/Urgent only	NO cascading
	-	16	E-mail Notification	C-28	On/Off	Off
	-	17	Voicemail Password	C-29	max 11 digits	none
	-	18	SMTP Server IP	C-29	Ex: xxx.xx.xx.x.	none
	-	19	E-mail Address	C-29	max 50 characters	none
	-	20	SMTP User ID	C-29	max 24 characters	none
	-	21	SMTP Password	C-29	max 24 characters	none
	-	22	First Name	C-29	max 12 characters	none
	-	23	Last Name	C-29	max 12 characters	none

CO LINE

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
130	-	Display Station Number by COS	-	-	-
-	1	Show Station by assigned Day COS	1-220	01-11	-
-	2	Show Station by assigned Night COS	1-220	01-11	-
131	-	Display Station by CO access Group	1-220	01-24	-
140	-	CO Service Type	-	-	-
-	1	CO Type	1-135	1-5	1: Normal
-	2	Sub Attributes of Normal CO	1-135	-	-
141	-	CO Line Attributes I	-	-	-
-	1	CO Line Group	1-151	00-25	01
-	2	CO COS	1-27	1-5	1
-	3	DISA Account Code	1-133	On/Off	On
-	4	CO Line Assign	1-220	Loop Start/Polarity Reverse	LoopStart
-	5	CO Line Type	1-220	CO/PBX	CO
-	6	CO Line Signal Type	1-220	Pulse/DTMF	DTMF
-	7	Flash Type Analog CO Lines only	1-54	Loop/Ground	Loop
-	8	Universal Night Answer (UNA)	1-136	On/Off	Off
-	9	CO Line Group Account	1-21	On/Off	Off
-	10	Tenancy Group	1-221	0-5	0
-	11	E911 Usage	1-5	On/Off	COL 01: On Other COLs: Off
	12	CO Start Signal		Loop/Ground	Loop
	13	Preset Forward Timer	1-43	00-99	00
	14	Preset ForwardDestination	1-44	1: Sta 2: Sta VMB 3: Hunt Grp 4: VMIB Announce	-
	15	Preset Forward VMID	1-44	0000-9999	0000
142	-	CO Line Attributes II	-	-	-
-	1	CO Line Name Display	1-119	On/Off	Off
-	2	CO Line Name Assign	1-119	max. 12 characters	-
-	3	Metering Unit	n/a	00-06	00: None
-	4	Line Drop using Call Progress Tone	1-221	On/Off	Off

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
CO LINE	-	5	CO Distinct Ring	1-48	0-4	0
	-	6	CO Line MOH	1-48	0-9	1: Int Music
	-	7	PABX CO Dial Tone	1-221	Yes/No	No
	-	8	PABX CO Ring Back Tone	1-221	Yes/No	No
	-	9	PABX CO Error Tone	1-221	Yes/No	No
	-	10	PABX CO Busy Tone	1-221	Yes/No	No
	-	11	PABX CO Announce Tone	1-222	Yes/No	No
	-	12	CO Flash Timer	1-54	000-300 (100 ms)	050
	-	13	Open Loop Detect Timer	1-185	00-20	04
	-	14	Line Length	n/a	Long/Short	0: Short
	-	15	DISA Answer Timer	1-222	1-9	2
	-	16	DISA Delay Timer	n/a	1-9	1
	-	17	SMDR Print	-	Yes/No	Yes
	-	18	Busy / Error CPT Detect	1-222	On/Off	Off
	-	19	LD Delay Count	n/a	0-5	0
	143	-	ISDN CO Line Attributes I	-	-	-
	-	1	COLP Table Index	1-222	00-50	00: not assigned
	-	2	CLIP Table Index	1-140	00-50	00: not assigned
	-	3	Type of Calling Number	1-140	0-4	2: National
	-	4	DID Conversion Type	1-121	0-2	0
	-	5	DID Remove No.	1-222	00-99	*not assigned*
	-	6	ISDN Enblock Send	1-223	On/Off	Off
	-	7	CLI Transit	1-145	CFW/ORI	ORI
	-	8	Numbering Plan ID	1-223	F1: 0-7 F2: 0-7	0
	-	9	ISDN Call Deflection/Call Rerouting	1-223	Disable Enable	Disable
	-	10	ISDN 1 Digit Remove	1-223	On/Off	Off
	-	11	ISDN Call Proc. Inband Message	n/a	On/Off	Off
	-	12	CLI TYPE	1-223	0: Normal 1: Long CLI 1 2: Long CLI 2	0: Normal
	-	13	*Reserved*	-	-	-

CO LINE

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	14	Screening	1-223	0: User Provided, No S 1: User Provided Pass 2: User Provided Fail 3: Network Provided	User Provided, No S
-	15	Double CLI Service	1-145	Transit/ORI	ORI
-	16	Prefix Table Index	n/a	-	-
-	17	Deny Inc Call	1-224	On/Off	Off
-	18	ICLID Usage	1-130	On/Off	Off
-	19	Drop If No CLI	1-224	On/Off	Off
144	-	CO Ring Assignment	-	Destination Type 1-6:	-
-	1	Day	1-13	1) Sta_R 2) Hunt 3) VMIB 4) Net-Sta 5) Auto Fwd to VM	-
-	2	Night	1-13		-
-	3	Weekend	1-13		-
-	4	Lunch	1-13		-
-	5	On-Demand	1-13		-
145	-	CO Ring Assignment Display	-	-	-
-	1	Day	1-13	-	-
-	2	Night	1-13	-	-
-	3	Weekend	1-13	-	-
-	4	Lunch	1-13	-	-
-	5	On-demand	1-13	-	-
146	-	CO Line Attributes III	-	-	-
-	1	Incoming Prefix Code Insertion	1-224	On/Off	Off
-	2	Outgoing Prefix Code Insertion	1-224	On/Off	On
-	3	ISDN Line Type	1-224	0: A-Law 1: μ-Law	μ-Law
-	4	Calling Sub-address	1-224	On/Off	Off (No)
-	5	DID DGT Receive Number	1-121	2-4	3
-	6	DID Digit Mask	1-121	4 digits (d.*,#)	#***
-	7	Collect Call Blocking	1-224	0: Disable 1: With Indicator 2: Without Indicator	Disable
-	8	Collect Call Answer Timer	1-224	001-250 (3 digits)	010 (100ms)

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
CO LINE	-	9	Collect Call IdleTimer	1-224	001-250 (3 digits)	020 (100 ms)
	147	-	CO Line CID Attributes	-	-	-
	-	1	CID Mode Select	1-42	0: Off 1: FSK 2: DTMF 3: Russia CID 4: Russia CID (Auto)	Off
	-	2	CID Name Display	1-42	1: Name: 1 Tel No: 0	0
	-	3	RCID Detect	n/a	-	-
	-	4	RCID Request	n/a	-	-
	-	5	RCID Req Timer	n/a	-	-
	-	6	RCID VIRAN Timer	n/a	-	-
	-	7	RCID Digit Number	n/a	-	-
	-	8	RCID Req Count	n/a	-	-
	-	9	RCID Req Delay	n/a	-	-
SLOT	155	-	Board Attributes	-	-	-
	-	1	R2 CRC Check	1-225	Enable/Disable	Disable
	-	2	Set Distance Coefficient	1-225	0-3	0
	-	3	DCO IP Address	1-225	12 digits (IP Addr)	-
	-	4	DCO Gateway IP Address	1-225	12 digits (IP Addr)	-
	-	5	DCO Subnet Mask	1-225	12 digits (IP Addr)	-
	-	6	DCO Server IP	1-225	-	-
	-	7	DCO Master Clock	1-225	1: Master 0: Slave	Slave
	-	8	PLL SSCG (for h/w engineering tests)	n/a	Enable/Disable	Disable
	-	9	T1 Setup Mode	1-226	0: D4 1: ESF	0: D4
	-	10	T1 Line Mode	1-226	1: AMI 0: B8ZS	0:B8ZS
SYSTEM	160	-	System Attributes 1	-	1-20	-
	-	1	Attendant Call Queuing Ringback Tone	1-7	RBT / MOH	MOH
	-	2	Camp RBT/MOH	1-226	RBT / MOH	MOH
	-	3	CO Line Choice	1-150	Last/Round	Last
	-	4	DISA Retry Counter	1-121	0-9	3
	-	5	ICM Continuous Dial-Tone	1-226	Cont / Discont	Cont
	-	6	CO Dial-Tone Detect	1-30	On/Off	Off

SYSTEM

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	7	External Night Ring	1-97	On/Off	Off
-	8	Hold Preference	1-188	Sys/Exec	Sys
-	9	Multi-line Conference	1-89	On/Off	On
-	10	Print LCR Conversion Digit	1-226	On/Off	Off
-	11	Conference Warning Tone	1-91	On/Off	On
-	12	Off-net Prompt Usage	1-226	On/Off	On
-	13	Off-net DTMF Tone	1-226	On/Off	On
-	14	CO Voice Path Connect	1-226	IMM / DGT	DGT
-	15	Transfer Tone	1-226	RBT / MOH	RBT
-	16	CO-CO Transfer CPT Detect (not used) *Moved to PGM 142 - FLEX 18*	1-227	-	-
-	17	ACD Package Usage	1-227	On/Off	Off
-	18	CO-CO Unsupervised Conference Timer Extend	1-53	On/Off	Off
-	19	Call Log List Number	1-37	10-50	10
-	20	*Reserved*	-	-	-
-	21	SIP Pound Usage	1-227	On/Off	Off
161	-	System Attributes II	-	1-23	-
-	1	PX Time/Date Setting	1-227	On/Off	Off
-	2	Off-Hook Ring Signal Type	1-227	Mute / Burst	Mute
-	3	Override 1st CO Line Group	1-151	On/Off	On
-	4	Page Warning Tone	1-93	On/Off	On
-	5	Auto Privacy	1-34	On/Off	On
-	6	Privacy Warning Tone	1-34	On/Off	On
-	7	Single Ring for CO Call	1-227	Yes/No	No
-	8	WTU Auto Release - *Reserved*	n/a	-	-
-	9	ACD Print Enable	1-105	On/Off	Off
-	10	ACD Print Timer	1-107	001-255 (3 digits)	001
-	11	ACD Clear Database after Print	1-107	On/Off	Off
-	12	VMIB Prompt Gain	1-227	00-31	08
-	13	CLI Information of VM SMDI	1-227	On/Off	Off

SYSTEM

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	14	ACD Print Timer Unit	1-228	Hour/Sec	Sec
-	15	Set VM SMDI Type	1-228	Type II / Type I	Type I
-	16	Incoming Toll Check	1-29	On/Off	Off
-	17	Auto FAX Transfer CO	1-33	01-36	-
-	18	No DSS Indication	1-228	Enable/Disable	Disable
-	19	UK Billing Mode	n/a	-	-
-	20	COS 7 When Auth Fail	1-228	On/Off	Off
-	21	5 Digit Authorization Code	1-21	On/Off	Off
-	22	LCR Dial Tone Detect	1-228	On/Off	Off
-	23	Transit-Out Security	A-19	On/Off	Off
162	-	Admin Password	1-3	4 digits (*, #, 0-9)	*not assgned*
163	-	(System) Alarm Attributes	-	-	-
-	1	Alarm Enable	1-31	On/Off	Off
-	2	Alarm Contact Type	1-31	Close / Open	Close
-	3	Alarm Mode	1-31	Alarm / Bell	Alarm
-	4	Alarm Signal Mode	1-32	RPT / Once	RPT
164	-	Attendant Assignment		Sta No.	1: 100
-	1	System Attendant Assignment	1-6	F1	Default = Sta 100
-	2	Main Attendants Assignment	1-6	F2-F5	*not assgned*
165	-	Auto Attendant	-	-	-
-	1	Auto Attendant Usage	C-20	On/Off	Off
-	2	Auto Attendant VMIB Annc.#	C-20	00-70	00 (*not assgned*)
166	-	CO-to-CO Class of Service	-	01-11	07
-	1	Day COS	1-27	01-11	07
-	2	Night/Weekend COS	1-27	01-11	07
167	-	DID/DISA Destination	-	F1-F8	-
-	1	Busy Destination	1-126	F1:Tone F2:Atd F3:Hunt	F1
-	2	Error Destination	1-126	F1:Tone F2:Atd F3:Hunt	F1
-	3	No Answer Destination	1-126	F1:Tone F2:Atd F3:Hunt	F1
-	4	DND Destination	1-126	F1:Tone F2:Atd F3:Hunt	--
-	5	VMIB Prompt Usage	1-122	F1-F5	F1

SYSTEM

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	-	1-Busy Prompt Usage	1-122	On/Off	On
-	-	2-Error Prompt Usage	1-122	On/Off	On
-	-	3-DND Prompt Usage	1-122	On/Off	On
-	-	4-No Ans Prompt Usage	1-122	On/Off	On
-	-	5-Atd Transfer Prompt Usage	1-122	On/Off	On
-	6	Reroute Busy Destination	1-229	F1:Tone F2:Atd F3:Hunt	F1
-	7	Reroute Error Destination	1-229	F1:Tone F2:Atd F3:Hunt	F1
-	8	Reroute No Answer Destination	1-229	F1:Tone F2:Atd F3:Hunt	F1
168	-	External Control Contact	-	1-3	-
-	1	First Contact	1-97	1: LBC 2: Door 3: Ext 1	-
-	2	Second Contact	1-97	1: LBC 2: Door 3: Ext 1	-
-	3	Third Contact	1-97	1: LBC 2: Door 3: Ext 1	-
-	4	Forth Contact	1-97	1: LBC 2: Door 3: Ext 1	-
169	-	LCD Date/Time/Language Display Mode	-	-	-
-	1	LCD Time Display Mode	1-11	12H / 24H	12H
-	2	LCD Date Display Mode	1-11	mmddyy / ddmmyy	ddmmyy
-	3	LCD Language Display Mode	1-11	00-15	00 = English
170	-	Modem Assignment	-	-	-
-	1	Station Number	1-196	100-131	Sta 131
-	2	CO Number	1-196	01-12	-
171	-	Music Assignment	-	-	-
-	1	BGM Type	1-229	0-8 (except 3)	1
-	2	MOH Type	1-76	0-9 (n/a for 3)	1
-	3	ICM Box Music Channel	1-96	0-8 (n/a for 3)	0
-	4	Assign MOH via SLT	1-229	F1-F5	-
-	5	Dial Tone Source	1-229	0-5	0 (*not assigned*)
-	6	ICM Ring Back Tone	1-230	0-5	0 (*not assigned*)
-	7	DID CO Ring Back Tone	1-230	0-5	0 (*not assigned*)
-	8	Intercom MOH Type	1-77	00-12	0 (Romance)
172	1-4	PBX Access Code	1-230	max. 2 digits	-
173	-	Preferred Line Ans (PLA) Priority Setting	-	-	-

SYSTEM

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	1	Transfer CO	1-134	1-4	1
-	2	Recalling CO	1-134	1-4	2
-	3	Incoming CO	1-134	1-4	3
-	4	Queued CO	1-134	1-4	4
174	-	RS-232C Port Settings	-	-	-
-	1	COM 1	1-198	F1-F4	-
-	2	COM 2 (MODU)	1-198	F1-F4	-
-	-	F1: Baud Rate	1-198	0-7	6: 19200
-	-	F2: CTS/RTS	1-198	On/Off	Off
-	-	F3: P-Break	1-198	On/Off	Off
-	-	F4: LPP	1-198	001-199	060
175	-	Print Port Selection	-	-	-
-	1	Off-line SMDR/Statistics Print	1-230	01-5 (n/a for 06 thru 11)	01: COM1
-	2	Admin Data	1-230	01-5 (n/a for 06 thru 11)	01: COM1
-	3	Traffic Print	1-207	01-5 (n/a for 06 thru 11)	01: COM1
-	4	SMDI Print	1-230	01-5 (n/a for 06 thru 11)	01: COM1
-	5	Call Info Print	1-230	01-5 (n/a for 06 thru 11)	01: COM1
-	6	On-line SMDR Print	1-230	01-5 (n/a for 06 thru 11)	01: COM1 n/a
-	7	Trace Print	1-230	01-5 (n/a for 06 thru 11)	01: COM1 n/a
-	8	Debug Print	1-230	01-5 (n/a for 06 thru 11)	01: COM1 n/a
-	9	PC_Adm	1-231	01-5 (n/a for 06 thru 11)	Auto Select
-	10	PC_Atd	1-231	01-5 (n/a for 06 thru 11)	08: Net_PC Atd
-	11	CTI	1-231	01-5 (n/a for 06 thru 11)	09: Net_CTI
-	12	Remote_Diag	n/a	-	-
176	-	Pulse Dial/Speed Ratio	1-231	1: 66/33 0: 60/40	1
177	-	SMDR Attributes	-	-	ALL
-	1	SMDR Save Enable	1-201	On/Off	Off
-	2	SMDR Print Enable	1-201	On/Off	Off
-	3	SMDR Recording Call Type	1-201	LD/ALL Call	LD
-	4	SMDR Long Distance Call Digit Counter	1-231	07-15	07

SYSTEM

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	5	Print Incoming Call	1-231	On/Off	Off
-	6	Print Lost Call	1-205	On/Off	Off
-	7	Records in Detail	1-231	On/Off	On
-	8	SMDR Dial Digit Hidden	1-232	0-9	0
-	9	SMDR Currency Unit	1-232	3 English Chars	-
-	10	SMDR Cost Per Unit Pulse	n/a	-	-
-	11	SMDR Fraction	n/a	-	-
-	12	SMDR Start Timer	1-232	000-250	000 (sec)
-	13	SMDR Hidden Digit	1-232	Right/Left	Right
-	14	SMDR Long Distance Codes	1-232	FLEX 1-5	0
-	15	MSN Print On SMDR	1-232	On/Off	Off
-	16	Print Caller Number	1-233	On/Off	Off
-	17	ICM SMDR Save	1-202	On/Off	Off
-	18	ICM SMDR Print	1-202	On/Off	Off
-	19	SMDR Interface service	n/a	-	-
-	20	I-SMDR connection (service) type	1-233	LAN / SIO	SIO
-	21	I-SMDR Author Index	1-233	On/Off	Off
178	-	System Time/Date Settings	-	-	-
-	1	System Time	1-234	4 digits (hhmm)	-
-	2	System Date	1-234	6 digits (ddmmyy)	-
-	3	DST Usage	1-234	On/Off	Off
-	4	Set DST Start	1-234	-	-
-	5	Set DST End	1-234	-	-
179		Linked Station Pairs	-	-	-
-	1	Linked Station Pair - View	1-149	100-131	None
-	2	Linked Station Pair - Iutput	1-149	2 Sta #	-
180	-	System Timers 1	-	-	-
-	1	Attendant Recall Timer	1-10	00-60	01 (min)
-	2	Call Park Recall Timer	1-190	000-600	120 (sec)
-	3	Camp-on Recall Timer	1-235	000-200	030 (sec)
-	4	Exclusive Hold Recall Timer	1-188	000-300	060 (sec)

SYSTEM

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	5	I-Hold Recall Timer	1-10	000-300	030 (sec)
-	6	Sys Hold Recall Timer	1-188	000-300	030 (sec)
-	7	Transfer Recall Timer	1-185	000-300	030 (sec)
-	8	ACNR Delay Timer	1-165	000-300	030 (sec)
-	9	ACNR No Answer Timer	1-165	10-50	30 (sec)
-	10	ACNR Pause Timer	1-165	005-300	030 (sec)
-	11	ACNR Retry Counter	1-165	01-30	03
-	12	ACNR No Tone Retry Counter	1-235	1-9	1
-	13	ACNR Tone Detect Timer	1-165	001-300	030 (sec)
-	14	Automatic CO Release Timer.	1-23	020-300	030 (sec)
-	15	CCR Inter-Digit Timer	1-121	000-255	030 (100ms)
-	16	CO Call Drop Warning Timer	1-235	00-99	10 (sec)
-	17	CO Call Restriction	n/a	-	-
-	18	CO Dial Delay Timer	1-235	00-99	01 (100ms)
-	19	CO Release Guard Timer	1-235	-	-
-	20	CO Ring Off Timer	1-235	010-150	060 (100 ms)
-	21	CO Ring On Timer	1-235	1-9	2 (100 ms)
-	22	CO Warning Tone Timer	n/a	060-900	180 (sec)
-	23	VM Outbound Retry Count	1-236	0-9	2
-	24	2nd Call Alert Timer	1-236	000-255	000 (sec)
181	-	System Timers 2	-	-	-
-	1	Call FWD No Answer Timer	C-9	000-255	015 (sec)
-	2	DID/DISA No Answer Timer	1-236	00-99	25 (sec)
-	3	VMIB User Record Timer	C-6	010-255	020 (sec)
-	4	VMIB Valid User Message Timer	C-6	0-9	4 (sec)
-	5	Door Open Timer	1-94	05-99	20 (100 ms)
-	6	ICM Box Timer	1-96	00-60	30 (sec)
-	7	ICM Dial Tone Timer	1-236	01-20	10 (sec)
-	8	Inter Digit Timer	1-150	01-20	05 (sec)
-	9	MSG Wait Reminder Tone Timer	1-236	00- 60	00 (min)
-	10	Paging Timeout Timer	1-175	000-255	015 (sec)

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	11	Pause Timer	1-236	1-9	3 (sec)
-	12	Preset Call Forward Timer	1-183	00-99	10 (sec)
-	13	SLT DTMF Release Timer	1-202	00-60	00 (sec)
-	14	3 Soft Auto Release Timer	1-236	01-30	05 (sec)
-	15	VM Pause Timer	1-236	01-90	30 (100 ms)
-	16	Transit Connect Timer	1-236	01-30	04
-	17	VMIB Message Rewind Timer	C-9	01-99	05 (sec)
-	18	LCO Connect Timer	n/a	-	-
-	19	LCO CPT Detect Timer	n/a	-	-
-	20	Forward to VMIB Timer	C-14	01-60	20 (sec)
182	-	System Timers 3	-	-	-
-	1	SLT Hook Switch Bounce Timer	1-54	01-25	01 (100 ms)
-	2	SLT Maximum Hook Flash Timer	1-55	001-250	050 (10 ms)
-	3	SLT Minimum Hook Flash Timer	1-55	000-250	020 (100 ms)
-	4	SLT Ring Phase Timer	1-43	2-5	5 (sec)
-	5	Station Auto Release Timer	1-23	020-300	060 (sec)
-	6	Unsupervised Conference Timer	1-89	00-99	10 (min)
-	7	Wake-Up Fail Ring Timer	1-87	00-99	20 (sec)
-	8	Warm Line Timer	1-155	01-20	05 (sec)
-	9	Wink Timer (future release)	1-237	010-200	010 (10 ms)
-	10	Enblock Digit Timer	1-237	01-20	05 (sec)
-	11	CCR Time Out Timer (use InterDigit Timer - PGM 181/F6)	n/a	000-300	015 (sec)
-	12	DID Inter Digit Timer	1-237	01-20	05 (sec)
-	13	FAX Tone Detect Timer	1-33	01-10	05 (sec)
-	14	FAX CO Call Timer	1-33	1-5	1 (min)
183	-	In-room Indication	-	01-10	-
-	1	In-room Indication - Supervisor	1-63	station no.	-
-	2	In-room Indication - Member	1-64	station range	-
184	-	Chime Bell	-	-	-
-	1	Chime Bell Station Pair	1-41	Bin 01-14	-

SYSTEM

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	2	Chime Bell Relay	1-41	1-14	-
-	3	Chime Bell Timer	1-41	01-20	02 (sec)
-	4	Chime Bell Frequency	1-41	F1-F2 (01-20)	-
186	-	DCOB System Attributes 1	-	-	-
-	1	DCOB CO Type	1-238	-	-
-	2	Metering Type	1-238	0-1	0
-	3	R2 OUT Manage Timer	1-238	01-50	14
-	4	R2 IN Manage Timer	1-238	01-50	14
-	5	R2 Disappear Timer	1-238	01-50	14
-	6	R2 Pulse Timer	1-238	01-30	07 (20 msec)
-	7	R2 Ready Timer	1-238	000-500	007 (20 msec)
-	8	Dial Tone Delay Timer	1-238	01-30	20
-	9	Line Status	1-238	1-9	6
-	10	Calling Category	1-238	1-9	1
-	11	ANI Request	1-238	On/Off	Off
-	12	CLI Digit Num	1-238	01-10	04
-	13	R2 Out Digit Timer	1-239	01-50	05
-	14	R2 Error Prompt Usage	1-239	On/Off	Off
-	15	R2 Busy Prompt Usage	1-239	On/Off	Off
-	16	R2 Announce Prompt Usage	1-239	On/Off	Off
-	17	DCO Gain	1-239	01-63	32
187	-	DCOB CO Line Attributes 2	-	CO Line range	-
-	1	Incoming Digit Type	1-239	0-2	2
-	2	Outgoing Digit Type	1-239	0-2	2
-	3	No Of CLI Digits	1-239	01-15	10
-	4	DCOB CO Type	n/a	0-2	2
-	5	Send S-Block Command	1-240	On/Off	Off
190		Station Group Assignment	-	620-629	-
-	1	Group Type	1-100	0-7	0
-	2	Pick-up Attribute	1-100	On/Off	Off
-	3	Member Assignment	1-100	not assigned	-

SYSTEM

STATION GROUP

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
191	-	Station Group Attributes (CIR/TERM)	-	-	-
-	1	VMIB Announce 1 Timer	1-101	000-999	015 (sec)
-	2	VMIB Announce 2 Timer	1-101	000-999	000 (sec)
-	3	VMIB Announce 1 Location	1-101	00-70	00 (*not assigned*)
-	4	VMIB Announce 2 Location	1-101	00-70	00 (*not assigned*)
-	5	VMIB Announce 2 Repeat Timer	1-101	000-999	000 (sec)
-	6	VMIB Announce 2 Repeat E/D	1-102	On/Off	Off
-	7	Overflow Destination	1-102	Sta # / Hunt #/ VMIB #/ Sys Spd #	-
-	8	Overflow Timer	1-102	000-600	180 (sec)
-	9	Wrap-up Timer	1-102	000-999	002 (sec)
-	10	No Answer Timer	1-102	00-99	15 (sec)
	11	Pilot Hunt	1-102	On/Off	On
-	12	Alt If No Member	1-102	On/Off	Off
-	13	Music Source	1-102	0 - 9	0 (*not assigned*)
-	14	Alternate Destination	1-103	Sta/Hunt Group	-
-	15	Max Queue Call Count	1-103	00-99	99
-	16	Hunt Member Forward	1-103	On/Off	On
-	17	Queue Count Display	1-103	On/Off	On
-	18	Hunt Group Name Assign	1-118	-	-
191	-	Station Group Attributes (UCD)	-	-	-
-	1	VMIB Announce 1 Timer	1-107	000-999	015 (sec)
-	2	VMIB Announce 2 Timer	1-107	000-999	000 (sec)
-	3	VMIB Announce Location 1	1-107	00-70	00 (*not assigned*)
-	4	VMIB Announce Location 2	1-107	00-70	00 (*not assigned*)
-	5	VMIB Announce 2 Repeat	1-107	000-999	000 (sec)
-	6	VMIB Announce 2 Repeat E/D	1-107	On/Off	Off
-	7	Overflow Destination	1-108	Sta #/Hunt #/VMIB #/ Sys Spd #	-
-	8	Overflow Timer	1-108	000-600	180 (sec)
-	9	Wrap Up Timer	1-108	000-999	002 (sec)

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
	-	10	Alt If No Member	1-108	0-9	0
	-	11	Music Source	1-108	On/Off	Off
	-	12	UCD Warning Tone	1-108	On/Off	On
	-	13	Alternate Destination	1-108	Sta #/Hunt #	-
	-	14	Supervisor Timer	1-109	000-999	030 (sec)
	-	15	Supervisor Call Count	1-109	00-99	00
	-	16	ACD Queued Call	1-109	On/Off	On
	-	17	Max Queue Call Count	1-109	00-99	99
	-	18	Supervisor	1-109	Sta #	-
	-	19	UCD Hunt Stations' Priority	1-109	0-9	0
	-	20	Hunt Member Forward	1-109	On/Off	Off
	-	21	UCD DND Timer	1-109	00-60	00 (sec)
	-	22	Queued Tone	1-109	On/Off	Off
		23	Hunt Group Name Assign	1-118	-	-
STATION GROUP	191	-	Station Group Attributes (RING)	-	-	-
	-	1	VMIB Announce 1 Timer	1-114	000-999	015 (sec)
	-	2	VMIB Announce 2 Timer	1-114	000-999	000 (sec)
	-	3	VMIB Announce 1 Location	1-114	00-70	00 (*not assigned*)
	-	4	VMIB Announce 2 Location	1-114	00-70	00 (*not assigned*)
	-	5	VMIB Announce 2 Repeat Timer	1-114	000-999	000 (sec)
	-	6	VMIB Announce 2 Repeat E/D	1-114	On/Off	Off
	-	7	Overflow Destination	1-114	Sta # / Hunt #/ VMIB #/ Sys Spd #	-
	-	8	Overflow Timer	1-115	000-600	180 (sec)
	-	9	Wrap Up Timer	1-115	000-999	002 (sec)
	-	10	Music Source	1-115	0-9	0
	-	11	Max. Queued Call Count	1-115	00-99	99
	-	12	Supervisor	1-115	Sta #	-
	-	13	Hunt Member Forward	1-115	On/Off	On
	-	14	Queue Count Display	1-115	On/Off	On
	-	15	Hunt Group Name Assign	1-118	-	-

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
STATION GROUP	191	-	Station Group Attributes (VM)	1-116	-	-
	-	1	Wrap-up Timer	1-116	000-999	002 (sec)
	-	2	Put Mail Index	1-116	1-4	1
	-	3	Get Mail Index	1-116	1-4	2
	-	4	Hunt Type	1-116	Cir/Term	Term
	-	5	SMDI Port	1-116	-	-
	-	6	Overflow Timer	1-116	000-600	180 (sec)
	-	7	Hunt Group Name Assign	1-118	-	-
	-	8	Overflow Destination	1-116	Sta # / Hunt #/ VMIB #/ Sys Spd #	-
	191	-	Station Group Attributes (PICK-UP)	-	-	-
	-	1	Auto Pick-up	1-117	On/Off	Off
	-	2	All Group Member Ringing	1-117	On/Off	Off
	191	-	Station Group Attributes (NetVM)	-	-	-
	-	1	NetVM Group Name Assign	1-118	-	-
ISDN	200	-	ISDN Attributes	-	-	-
	-	1	Advice of Charge (AOC)	n/a	-	-
	-	2	CO ATD Code	1-240	max. 2 digits	-
	-	3	*Reserved*	-	-	-
	-	4	*Reserved*	-	-	-
	-	5	*Reserved*	-	-	-
	-	6	CLI Print	n/a	-	-
	-	7	International Access Code	n/a	-	-
	-	8	*Reserved*	-	-	-
	-	9	My Area Code	1-141	max. 6 digits	-
	-	10	My Area Prefix Code	1-141	max. 4 digits	-
	-	11	Maintain DID Name	n/a	-	-
	-	12	PC Application Destination Station	n/a	-	-
	201	-	COLP Table (*enter bin # 00-49*)	1-140	max. 10 digits	-
	-	-	TABLES	-	-	-
	202	-	MSN Table Attributes (*enter bin # 000-249*)	1-247	-	-

TABLES

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
204	-	Local Code Table	1-202	entry no. (01-16) max. 5 digits	-
205	-	Enblock Prefix Tables	-	1-6	-
220	-	Least Cost Routing	-	-	-
-	1	LCR Access Mode	1-158	M00 / M01 / M02 / M11 / M12 / M13	Disable (M00)
-	2	Day Zone	1-158	Day: F1-F7 + Zone: 1-3	1234567
-	-	Monday	1-158	-	1
-	-	Tuesday	1-158	-	1
-	-	Wednesday	1-158	-	1
-	-	Thursday	1-158	-	1
-	-	Friday	1-158	-	1
-	-	Saturday	1-158	-	1
-	-	Sunday	1-158	-	1
-	3	Time Zone of Day Zone 1	1-158	-	-
-	-	Time Zone1	1-158	00-24	0024
-	-	Time Zone2	1-158	00-24	-
-	-	Time Zone3	1-158	00-24	-
-	4	Time Zone of Day Zone 2	1-158	00-24	-
-	-	Time Zone1	1-158	00-24	0024
-	-	Time Zone2	1-158	00-24	-
-	-	Time Zone3	1-158	00-24	-
-	5	Time Zone of Day Zone 3	1-158	-	-
-	-	Time Zone1	1-158	00-24	0024
-	-	Time Zone2	1-158	00-24	-
-	-	Time Zone3	1-158	00-24	-
221	-	Leading Digit Table	-	Bin # 000-249	-
-	1	LCR Type	1-160	1-3	3
-	2	LCR Code (leading digit)	1-160	max. 12 digits	-
221	3	Day Zone 1 DMT	1-160	6 digits	-
-	4	Day Zone 2 DMT	1-160	6 digits	-

TABLES

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	5	Day Zone 3 DMT	1-160	6 digits	-
-	6	Check Password	1-160	On/Off	Off
222	-	Digit Modification Table	-	Bin # 00-99	-
-	1	Added Digit	1-161	max. 20 digits	-
-	2	Removal Position	1-161	01-12	01
-	3	Number Of Remove	1-161	00-12	00
-	4	Add Position	1-161	01-13	01
-	5	CO Line Group	1-161	01-24	01
-	6	Alternative DMT Index	1-161	00-99	-
223	-	LCR Table Initialization	-	-	-
-	1	DMT of Day_Zone_1	1-162	6 digits	-
-	2	DMT of Day_Zone_2	1-162	6 digits	-
-	3	DMT of Day_Zone_3	1-162	6 digits	-
-	4	CO Grp Init	1-162	1-24	-
-	5	Alternative Index Init	1-162	0-99	-
-	6	Init All LCR	1-162	-	-
224	-	Toll Exception Table	-	-	-
-	1	Allow Table A (01-30)	1-28	max. 14 digits	-
-	2	Deny Table A (01-30)	1-28	max. 14 digits	-
-	3	Allow Table B (01-30)	1-28	max. 14 digits	-
-	4	Deny Table B (01-30) NOTE -- After programming FLEX 1-4, you must reenter PGM 224 to re-gain access for programming FLEX 5-8 and vice versa.	1-28	max. 14 digits	-
-	5	Allow Table C (01-50)	1-28	max. 14 digits	-
-	6	Deny Table C (01-50)	1-28	max. 14 digits	-
224	7	Allow Table D (01-50)	1-28	max. 14 digits	-
-	8	Deny Table D (01-50)	1-28	max. 14 digits	-
225	-	Canned Toll Tables	-	-	-
-	-	Allow Table (01-20)	1-29	max. 14 digits	-
-	-	Deny Table (01-20)	1-29	max. 14 digits	-

TABLES

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
226	-	Emergency Service Call (bin #s 01-10)	1-154	max. 14 digits	-
227	-	Authorization Code Table	-	001-200	-
-	1	Table entry (bin #s 001-200)	1-21	max. 5 digits or 3-11 digits	-
-	2	Day COS	1-21	1-9	-
-	3	Night COS	1-21	1-9	-
228	-	Customer Call Routing (CCR) Table	-	01-70	-
-	1-10	Unassigned Destinations	1-123	FLEX 1-10	-
-	11	Busy Destination	1-123	Flex 1: Tone Flex 2: Atd Flex 3: Fwd to Hunt Grp Flex 4: VMIB Announce	Atd
-	12	Error / Time Out Destination	1-123	Flex 1: Tone Flex 2: Atd Flex 3: Fwd to Hunt Grp Flex 4: VMIB Announce	Atd
-	13	No Answer Destination	1-123	Flex 1: Tone Flex 2: Atd Flex 3: Fwd to Hunt Grp Flex 4: VMIB Announce	Atd
	14	Record System Prompt	1-123	Flex 1: Tone Flex 2: Atd Flex 3: Fwd to Hunt Grp Flex 4: VMIB Announce	Atd (001-070) Remote (01-70)
229	1	Executive/Secretary Assignment Table	1-147	100-131	-
-	2	CO Call to Secretary	1-147	On/Off	Off
-	3	Call Executive if Secretary is in DND	1-147	On/Off	Off
-	4	Executive Grade	1-147	01-12	01
231	-	Flexible DID Table	-	(bin #s 000-999)	-
-	1	DID Name	1-127	-	-
-	2	Day Destination	1-127	01-11	-
-	3	Night Destination	1-127	01-11	-
-	4	Weekend Destination	1-127	01-11	-
-	5	Lunch Destination	1-127	01-11	-
-	6	Reroute Destination	1-127	1-7	-
232	-	System Speed Zone	-	01-10	-

TABLES

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	1	Speeed Bin Range in Zone	1-171	2200-2499	-
-	2	Station Range to Access Zone	1-171	100-131	-
-	3	Toll Check	1-171	On/Off	On
-	4	Authorization Check	1-171	On/Off	Off: Zone 1 On: Zones 2-10
233	-	Weekly Time Table	1-14	-	-
234	-	Voice Mail Dialing Table	-	-	(up to 12 digits)
-	-	1: VM Table 1	C-31	-	Prefix: P# Suffix: -
-	-	2: VM Table 2	C-31	-	Prefix: P## Suffix: -
-	-	3: VM Table 3	C-31	-	Prefix: P#*3P Suffix: -
-	-	4: VM Table 4	C-31	-	Prefix: P#*4P Suffix: -
-	-	5: VM Table 5	C-31	-	Prefix: P#*5P Suffix: -
-	-	6: VM Table 6	C-31	-	Prefix: P#*6P Suffix: -
-	-	7: VM Table 7	C-31	-	Prefix: Suffix: -
-	-	8: VM Table 8	C-31	-	Prefix: Suffix: -
-	-	9: VM Table 9	C-31	-	*****
236	1	Mobile Extension Table (01-48)	-	On/Off	Off
-	2	Mobile Ext Table CO Group	1-241	01-24	01
-	3	Table Tel Number	1-241	-	-
-	4	Table CLI	1-241	-	-
-	5	Table Hunt Call	1-241	On/Off	Off
-	6	Table VM Notice	1-241	On/Off	Off
-	7	Table Usage	1-241	On/Off	Off
237	1	ICLID Table - CLI Number	1-129	001-100	-
-	2	Conversion Table Index	1-129	-	-
238	-	Voice Mailbox COS	-	1-5	1
-	1	Greeting length	C-30	00-99 seconds	15

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
TAB;ES	-	2	Message record time	C-30	001- 600 seconds	300
	-	3	Number of messages	C-30	01-250	50
	-	4	Message Retention time	C-30	01-99 days	15
	-	5	E-mail notification	C-30	Enable/Disable	Disable
	-	6	Future delivery	C-30	Enable/Disable	Disable
	-	7	Confirm message receipt	C-30	Enable/Disable	Disable
	-	8	Private message mark	C-30	Enable/Disable	Enable
	250	-	Hot Desk	-	-	-
	-	1	Hot Desk Agent No.	1-62	00-96	-
	-	2	View Agent Range	1-62	-	-
	-	3	Auto Logut Timer	1-62	00-24 hours	-
NETWORKING	320	-	Networking Basic Attributes	-	Flex 1-Flex 7	-
	-	1	Networking Enable	A-22	On/Off	Off
	-	2	Networking Retry Count	A-22	00-99	00
	-	3	Networking CNIP Enable	A-22	On/Off	On
	-	4	Networking CONP Enable	A-22	On/Off	Off
	-	5	Networking Signal Method	A-22	FAC / UUS	FAC
	-	6	Networking CAS Enable	A-22	On/Off	Off
	-	7	Networking VPN Enable	A-23	On/Off	Off
	-	8	NET CC Retain Mode	A-23	On/Off	Off
	321	-	Supplementary Attributes	-	Flex 1-Flex 7	-
	-	1	Networking Transfer Mode	A-23	Reroute / Join	Reroute
	-	2	TCP port (for BLF)	A-4	4 digits	9000
	-	3	UDP port (for BLF)	A-4	4 digits	9001
	-	4	BLF Manager IP Address	A-4	12 digits	0.0.0.0
	-	5	Duration of BLF status	A-4	01-20 sec	02
	-	6	Multicast IP Address	A-23	12 digits	0.0.0.0
	-	7	Net Trans Fault Recall Timer	A-23	001-300	010
	-	8	VoIP Call Reroute CO Group	A-23	00-24	00
	322	-	Networking CO Line Attributes	-	CO Line range	-
	-	1	Networking CO Line Group	A-4	00-24	00

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
NETWORKING	-	2	VOIP Mode	A-24	0: H.323 1: SIP	0: H.323
	-	3	Usage Gatekeeper	A-24	On/Off	Off
	-	4	Net Co Line Type	A-24	NET/PSTN	PSTN
	-	5	DTMF Mode	A-24	2: Inband 3: RFC2833 4: Outband DTMF	2
	324	-	Networking Routing Table	-	00-71	-
	-	1	System Usage	A-24	NET/PSTN	NET
	-	2	Net Numbering Plan Code	A-24	16 digits	-
	-	3	Net Number Plan CO Line Group	A-25	00-24	-
	-	4	CPN or IP Information	A-10	16 digits at QSIG, IP Addr at VoIP (4)	...../ 0.0.0.0
	-	5	Alternate Speed Dial Bin	A-25	2000-2499	-
	-	6	Destination MPB IP	A-25	IP Address	-
	-	7	Digit Repeat	A-25	Yes/No	No
	-	8	CO ATD Code CLI	A-25	On/Off	Off
	-	9	Firewall Routing	A-25	Yes/No	No
		10	Authorization Code COS Use	A-25	Yes/No	No
		11	SMDR Dial Hidden	A-25	Yes/No	No
VOIP	340	-	VOIP IP Settings	-	-	-
	-	1	IP Addressing (skip:#)	B-2	12 digits	0.0.0.0
	-	2	GATEWAY Addressing (Skip:#)	B-2	12 digits	0.0.0.0
	-	3	Subnet Mask (Skip:#)	B-2	12 digits	250.250.255.0
	-	4	DNS Addressing (Skip:#)	B-2	12 digits	0.0.0.0
	-	5	Trace Password	B-8	10 digits	. . . .
	-	6	Default Codec	B-8	0-4	0 (G.723.1)
	-	7	Default Gain	B-8	01-62	31
	-	8	No Delay (TOS)	B-8	On/Off	Off
	-	9	Throughput (TOS)	B-8	High / Normal	Normal
	-	10	Reliability (TOS)	B-8	High / Normal	Normal
	-	11	Firewall IP Address	B-8	IP Address	0.0.0.0
	-	12	VOIB MODE	B-8	0: H.323 1: SIP 2: Dual	H.323

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
VOIP	-	13	Silence Detection	B-8	On/Off	Off
	-	14	Echo Canceller	B-9	On/Off	On
	-	15	DTMF Mode	B-9	2: Inband 3: RFC 2833 4: Outband DTMF	2
	-	16	Jitter Buffer	B-9	050-300 (ms)	150
	-	17	Voice Monitor	B-9	On/Off	Off
	-	18	H.323 Fast Mode	B-6	Fast: 1 Normal: 0	Fast
	-	19	Early H.245	B-4	On/Off	Off
	-	20	H.245 Tunneling	B-5	On/Off	Off
	-	21	TOS Preference	B-7	0-7	0
	-	22	Fax Mode (not supported)	B-9	On/Off	Off
RSG/IP	341	-	Gatekeeper Setting	-	-	-
	-	1	Gatekeeper Usage	B-10	On/Off	Off
	-	2	Gatekeeper Call Mode	B-10	Direct/Reroute	Reroute
	-	3	Gatekeeper Open H245	B-10	On/Off	Off
	-	4	Gatekeeper H245 Tunneling	B-10	On/Off	Off
	-	5	Gatekeeper Pre-granted ARQ	B-10	On/Off	Off
	-	6	Gatekeeper Out-Of-Band Flash	B-10	On/Off	Off
	-	7	Gatekeeper Time To Live	B-10	000-250 (sec)	030
	-	8	Gatekeeper Address(SKIP:#)	B-10	12 digits	0.0.0.0
	-	9	Gatekeeper Find Address (SKIP:#)	B-10	12 digits	224.0.1.41
	-	10	Gatekeeper Find Port	B-10	0000-9999	1718
	-	11	Gatekeeper RAS Signal Port	B-10	0000-9999	1719
	-	12	Gatekeeper Signal Port	B-10	0000-9999	1720
	-	13	VOIB Gatekeeper ID	B-10	23 characters	-
	-	14	VOIBH323 ID	B-11	23 characters	-
	-	15	VOIB E164 Address	B-11	23 digits	-
	-	16	VOIB Terminal Alias	B-11	20 digits	-
	380	-	RSG/IP Phone	-	-	-
	-	1	VOIB Slot Assign	B-11	-	10
	-	2	VOIB Channel Assign	B-11	0-8	-

RSG/IP

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
381	-	RSG/IP Number Assign	-	-	-
-	1	RSG Number	n/a	-	-
-	2	IP Phone Number	B-11	00-16	0
382	-	RSG/IP Attributes	-	-	-
-	1	Transfer Mode	B-12	IP / MAC	IP
-	2	Casting Mode	B-12	Unicast / Multicast	Unicast
-	3	Tone Source	B-12	0:Off (RSG/IP Phone) 1:On (SBX IP)	Off
-	4	Peer to Peer	B-12	On/Off	On
-	5	Codec Type	B-12	0: G.711_ALAW 1: G.711_ULAW 2: G.723.1(2) 3: G.729. 4: G.729A	G.711_ALAW
-	6	First Access RSG CO	B-12	On/Off	On
-	7	Ring Without CO Ring Assign	B-12	On/Off	On
386	-	IP Phone Attributes	-	01-16	-
-	1	Set MAC ADDR	B-13	-	00-00-00-00-00-00
-	2	IP Address Display	B-13	-	0.0.0.0
-	3	Port View	B-13	-	N/A
-	4	Port NUM	B-13	-	N/A
-	5	NAT IP ADDR Display	B-13	-	0.0.0.0
-	6	NAT Port NUM	B-13	-	0
-	7	STUN Enabled	B-13	-	None
-	8	CTI IP ADDR (Skip : #)	B-13	-	0.0.0.0
-	9	IPSEC	B-13	On/Off	Off
-	10	Outside NAT Firewall	B-13	On/Off	Off
-	11	User ID* *Nomad SP/IP can be registered to the system by entering this User ID / Password. So the user can register easily by using same ID / Password even if their MAC address is changed.	B-13	max. 12 characters	-

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	12	User Password	B-13	max. 12 characters	-
396	-	RSG IP Phone RX Gain	-	-	-
-	1	IP Phone RX from DKTU	B-14	00-63	26
-	2	IP Phone RX from SLT	B-14	00-63	33
-	3	IP Phone RX from CTR SLT	B-14	00-63	22
-	4	IP Phone RX from WKT SLT	B-14	00-63	26
-	5	IP Phone RX from ACO	B-14	00-63	33
-	6	IP Phone RX from CTR ACO	B-14	00-63	22
-	7	IP Phone RX from DCO	B-14	00-63	33
-	8	IP Phone RX from VMIB	B-14	00-63	29
-	9	IP Phone RX from DTMF	B-14	00-63	08
-	10	IP Phone RX from Tone	B-14	00-63	32
-	11	IP Phone RX from Music 1	B-14	00-63	29
-	12	IP Phone RX from Music 2	B-14	00-63	29
-	13	IP Phone RX from R_DKT	B-14	00-63	26
-	14	IP Phone RX from R_SLT	B-14	00-63	22
-	15	IP Phone RX from R_LCO	B-14	00-63	22
-	16	IP Phone RX from IP Phone	B-14	00-63	26
397	-	RSG IP Phone TX Gain	-	00-63	-
-	1	IP Phone TX to DKTU	B-14	00-63	26
-	2	IP Phone TX to SLT	B-14	00-63	33
-	3	IP Phone TX to CTR SLT	B-14	00-63	22
-	4	IP Phone TX to WKT	B-14	00-63	26
-	5	IP Phone TX to ACO	B-14	00-63	33
-	6	IP Phone TX to CTR_ACO	B-14	00-63	22
-	7	IP Phone TX to DCO	B-14	00-63	33
-	8	IP Phone TX to VMIB	B-14	00-63	29

RSG/IP

NATION SPECIFIC

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	-	NATION SPECIFIC	n/a	-	-
400	-	DTIB RX Gain (Korean version)		-	-
-	1	DTIB/DKT		00-63	26
-	2	DTIB/SLIB		00-63	22
-	3	-		-	-
-	4	-		-	-
-	5	DTIB/ACOB		00-63	10
-	6	-		-	-
-	7	DTIB/DCOB		00-63	33
-	8	DTIB/VMIB		00-63	29
-	9	DTIB/DTMF		00-63	08
-	10	DTIB/Tone		00-63	32
-	11	DTIB/Music1		00-63	29
-	12	DTIB/Music2		00-63	29
-	13	-		-	-
401	-	SLIB RX Gain	1-242	-	-
-	1	SLIB/DKT	1-242	00-63	12
-	2	SLIB/SLT	1-242	00-63	32
-	3	-	1-242	-	-
-	4	-	1-242	-	-
-	5	SLIB/ACOB	1-242	00-63	32
-	6	-	1-242	-	-
-	7	SLIB/DCOB	1-242	00-63	44
-	8	SLIB/VMIB	1-242	00-63	40
-	9	SLIB/DTMF	1-242	00-63	28
-	10	SLIB/Tone	1-242	00-63	28
-	11	SLIB/Music1	1-242	00-63	40
-	12	SLIB/Music2	1-242	00-63	40
-	13	-	1-242	-	-
404	-	ACOB RX Gain	1-242	-	-
-	1	ACOB/DKT	1-242	00-63	35

NATION SPECIFIC

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	2	ACOB/SLIB	1-242	00-63	32
-	3	DTI-SPK	1-242	00-63	-
-	4	-	1-242	-	-
-	5	ACOB/ACOB	1-242	00-63	26
-	6	-	1-242	-	-
-	7	ACOB/DCOB	1-242	00-63	38
-	8	ACOB/VMIB	1-242	00-63	37
-	9	ACOB/DTMF	1-242	00-63	36
-	10	ACOB/Tone	1-242	00-63	37
-	11	ACOB/Music1	1-242	00-63	37
-	12	ACOB/Music2	1-242	00-63	37
-	13	-	1-242	-	-
-	14	ACOB/Modem	1-242	00-63	37
406	-	DCOB RX Gain	1-243	-	-
-	1	DCOB/DKT	1-243	00-63	26
-	2	DCOB/SLIB	1-243	00-63	26
-	3	-	1-243	-	-
-	4	-	1-243	-	-
-	5	DCOB/ACOB	1-243	00-63	15
-	6	-	1-243	-	-
-	7	DCOB/DCOB	1-243	00-63	32
-	8	DCOB/VMIB	1-243	00-63	32
-	9	DCOB/DTMF	1-243	00-63	32
-	10	DCOB/Tone	1-243	00-63	32
-	11	DCOB/Music1	1-243	00-63	32
-	12	DCOB/Music2	1-243	00-63	32
-	13	-	1-243	-	-
-	14	DCOB/Modem	1-243	00-63	37
407	-	VMIB RX Gain	1-243	-	-
-	1	VMIB/DKT	1-243	00-63	21
-	2	VMIB/SLIB	1-243	00-63	21

NATION SPECIFIC

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	3	-	1-243	-	-
-	4	-	1-243	-	-
-	5	VMIB/ACOB	1-243	00-63	23
-	6	-	1-243	-	-
-	7	VMIB/DCOB	1-243	00-63	32
-	8	VMIB/Music1	1-243	00-63	32
-	9	VMIB/Music2	1-243	00-63	32
408	-	DTMF RC Gain	1-243	-	-
-	1	DTMF/SLIB	1-243	00-63	32
-	2	-	1-243	-	-
-	3	DTMF/ACOB	1-243	00-63	32
-	4	-	1-243	-	-
-	5	DTMF/DCOB	1-243	00-63	32
409	-	External Page Gain	1-243	-	-
-	1	EXT Page/DKT	1-243	00-63	26
-	2	EXT Page/SLIB	1-243	00-63	26
-	3	-	1-243	-	-
-	4	-	1-243	-	-
-	5	EXT Page/ACOB	1-243	00-63	28
-	6	-	1-243	-	-
-	7	EXT Page/DCOB	1-243	00-63	37
-	8	EXT Page/VMIB	1-243	00-63	37
-	9	EXT Page/Music1	1-243	00-63	37
-	10	EXT Page/Music2	1-243	00-63	37
-	11	-	1-243	-	-
410	-	CPT Gain	1-244	-	-
-	1	CPT/ACO	1-244	00-63	32
-	2	-	1-244	-	-
-	3	CPT/DCO	1-244	00-63	32
411	-	Modem Gain	1-244	-	-
-	1	Modem/ACO	1-244	00-63	20

NATION SPECIFIC

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	2	-	1-244	-	-
-	3	Modem/DCO	1-244	00-63	24
412	-	Short SLIB Gain (SAF only)	n/a	-	-
-	1	Short ACO		00-63	32
-	2	Long ACO		00-63	32
413	-	Long SLIB Gain (SAF only)	n/a	-	-
-	1	Short ACO		00-63	32
-	2	Long ACO		00-63	32
414	-	Far SLIB Gain (SAF only)	n/a	-	-
-	1	Short ACO		00-63	32
-	2	Long ACO		00-63	32
415	-	Short ACO Gain (SAF only)	n/a	-	-
-	1	Short SLIB		00-63	32
-	2	Long SLIB		00-63	32
-	3	Far SLIB		00-63	32
-	4	DTIB		00-63	26
416	-	Long ACO Gain (SAF only)	n/a	-	-
-	1	Short SLIB		00-63	32
-	2	Long SLIB		00-63	32
-	3	Far SLIB		00-63	32
-	4	DTIB		00-63	32
417	-	MBU DSP RX Gain	1-245	-	-
-	1	<- ACO SMS (n/a)	1-245	00-63	24
-	2	<- DCO SMS (n/a)	1-245	00-63	38
-	3	<- SLT SMS (n/a)	1-245	00-63	17
-	4	<- ACO DTMF CID	1-245	00-63	38
-	5	<- ACO FSK CID	1-245	00-63	38
-	6	<- ACO R. CID	1-245	00-63	38
418	-	MBU FSK TX Gain	1-245	-	-
-	1	-> ACO SMS (n/a)	1-245	00-63	32
-	2	-> DCO SMS (n/a)	1-245	00-63	38

NATION SPECIFIC

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
-	3	-> SLT SMS (n/a)	1-245	00-63	32
-	4	-> SLT FSK CID	1-245	00-63	32
420	-	System Tone Frequency	1-245	-	-
-	1	Dial Tone (nation specific)	1-245	4 digits	0350Hz, 0440Hz
-	2	Ring Back Tone (nation specific)	1-245	4 digits	0440Hz, 0480Hz
-	3	Busy Tone (nation specific)	1-245	4 digits	0480Hz, 0620Hz
-	4	Error Tone (nation specific)	1-245	4 digits	0480Hz, 0620Hz
-	5	Dummy Dial Tone (Nation specific)	1-245	4 digits	0350Hz, 0440Hz
421	-	Differential Ring Frequency	1-245	-	-
-	1	Ring 1 (nation specific)	1-245	4 digits	1000Hz, 1020Hz
-	2	Ring 2 (nation specific)	1-245	4 digits	0890Hz, 0910Hz
-	3	Ring 3 (nation specific)	1-245	4 digits	1260Hz, 1280Hz
-	4	Ring 4 (nation specific)	1-245	4 digits	0800Hz, 0820Hz
422	-	Distinct Ring Frequency	1-245	-	(nation specific)
-	1	Ring 1	1-245	4 digits	0480Hz, 0000Hz
-	2	Ring 2	1-245	4 digits	0400Hz, 0000Hz
-	3	Ring 3	1-245	4 digits	0620Hz, 0000Hz
-	4	Ring 4	1-245	4 digits	0770Hz, 0000Hz
423	-	ACNR Tone Cadence	1-246	(20 msec base)	-
-	-	1: Ring-Back Tone	1-246	000-255	On: 100 / Off: 200
-	-	2: Busy Tone	1-246	000-255	On: 025 / Off: 025
-	-	3: Error Tone	1-246	000-255	On: 012 / Off: 012
-	-	4: S-Dial Tone	1-246	000-255	On: 150 / Off: 000
424	-	DTIB Rx ACO Gain (SAF only)	n/a	-	-
-	1	Short ACO	n/a	00-63	37
-	2	Long ACO	n/a	00-63	42

INIALIZATION

PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
450	-	Initialization	1-247	-	-
-	1	Flexible Numbering Plan Initialization		PGM 105-107	-
-	2	Station Database Initialization (*enter station range*)		PGM 110-114 PGM 116-119 PGM 121-124 PGM 179	-
-	3	CO Line natabase Initialization (*enter CO numbers*)		PGM 140-144	-
-	4	System Feature Database Initialization		PGM 160-177 PGM 108	-
-	5	Station Group Database Initialization		PGM 190-191	-
-	6	ISDN Tables Database Initialization		PGM 201 PGM 202 PGM 230	-
-	7	*Reserved*		-	-
-	8	System Timer Database Initialization		PGM 180-182	-
-	9	Toll Table Database Initialization		PGM 224-225	-
-	10	LCR Database Initialization		PGM 220-222	-
-	11	Other Tables Initialization		PGM 227-229 PGM 232-235	-
-	12	Flexible Button Program Initialization		PGM 115	-
-	13	Networking Database Initialization		PGM 320-324	-
-	14	All Database Initialization		Above All	-
-	15	System Reset By Software		-	-
-	16	DID Reroute Table		PGM 231	-
-	17	Board Data		PGM 155, 340-341	-

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
PRINT DATABASE	451	-	Print Database (Print Prot Data)	1-248	-	-
	-	1	Flexible Numbering Plan Print		-	-
	-	2	Station Database Print		STN_R	-
	-	3	CO Line Database Print		CO_R	-
	-	4	System Feature Database Print		-	-
	-	5	Station Group Database Print		-	-
	-	6	ISDN Tables Database Print		-	-
	-	7	System Timer Database Print		-	-
	-	8	Toll Table Database Print		-	-
	-	9	LCR Database Print		-	-
	-	10	Other Tables Print		-	-
	-	11	Nation Specific Database Print		-	-
	-	12	Flexible Button Program Print		STN_R	-
		13	All Database Print		-	-
	-	14	Networking Data Print		-	-
	-	15	Quit Print		-	-
SIP	500	-	SIP Attributes 1 (*via PC Admin Only*)	B-15	-	-
	-	1	SIP Proxy Server Address		-	0.0.0.0
	-	2	SIP Proxy Server Port		-	5060
	-	3	Proxy Registration Timer		-	3600
	-	4	Use Outbound Proxy		On/Off	On
	-	5	Primary DNS Address		-	-
	-	6	Secondary DNS Address		-	-
	-	7	Called Party Domain		-	-
	-	8	Connection Mode		UDP or TCP	UDP
	-	9	100Rel Support		On/Off	Off
	-	10	Use R-port Method		On/Off	Off
	-	11	Use Single Codec Only		On/Off	Off
	-	12	Remote Part ID		On/Off	Off
	-	13	181 Message		On/Off	On
	-	14	IP Centrex		On/Off	Off

	PGM Code	Flex Btn	Feature	Page No.	Range	Default Value
SIP	501	-	SIP Attributes 2 (*via PC Admin Only*)	B-16	-	-
	-	1	User ID		64 ASCII characters	-
	-	2	Authentication User Name		64 ASCII characters	-
	-	3	Authentication Password		64 ASCII characters	-
	-	4	Contact Number		max. 8 digits	-
	-	5	User ID Register		0-1	0
	-	6	User ID Usage		On/Off	-
	-	7	Associated Station		Sta #	-

Attendant Programming Codes

Attendant Function	Prog Code	Type of Attendant
Abort Periodic Printing	0123	SYS
Abort Printing	0116	SYS
Authorization Code Cancel	031	SYS
Automatic Day/Night/Weekend/ On Demand/Auto Ring Mode/ Lunch Mode	074	ATD
Custom Display Message (11-20)	053	SYS
Delete Lost Call	0118	SYS
Delete SMDR (Group Base)	0114	SYS
Delete SMDR (Station Base)	0112	SYS
Disable CO Outgoing	073	SYS
Display Call Charge	0115	SYS
DND/Call Forward/Pre-selected Message Cancel	071	ATD
External Page Music -1 Assignment/Cancel	076	ATD
Forced Delete Conference Rm	048	ATD
ICM Box BGM Channel Select	075	ATD
LCD Date Mode Change	044	SYS
LCD Display Language	07*	-
LCD Time Mode Change	045	SYS
Monitor Conference Room	047	ATD
Prepaid Call	079	-
Pre-select Message Activation	051	ATD
Pre-select Message Deactivation	052	ATD

Attendant Function	Prog Code	Type of Attendant
Print All Periodically	0122	SYS
Print All Summary	0121	SYS
Print ATD Traffic	0124	SYS
Print Call Hourly	0126	SYS
Print Call Summary	0125	SYS
Print CO Hourly	0129	SYS
Print CO Summary	0128	SYS
Print H/W Usage	0127	SYS
Print Lost Call	0117	SYS
Print SMDR (Group Base)	0113	SYS
Print SMDR (Station Base)	0111	SYS
Record VMIB System Greeting	06	SYS
Register Station Name	072	ATD
Reserved	054	-
Set Call Forward	091	ATD
Station COS Down (COS 7)	021	ATD
Station COS Restore	022	ATD
System Date/Time Setting	041	ATD
Use Network Time & Date	046	SYS
Wake-up Time Cancel	043	SYS
Wake-up Time Registration (One-time/Continuous)	042	ATD

Fixed Station Programming Codes

The following numbering plan is fixed, so it cannot be changed in ADMIN PROGRAMMING.

Fixed Code	Feature
11	Differential Ring (Keyset)
12	Intercom Ans Mode (Keyset)
14	Enblock Mode (LDP Keyset)
17	Ear-Mic Headset (LDP Keyset)
18	ICM Ring (LDP Keyset)
19	CO Ring (LDP Keyset)
21	Station COS Down
22	Station COS Restore
23	Walking COS (Keyset)
31	Authorization Code Registration
32	Authorization Code Change
33	Registration Mobile - Extension
34	Active Mobile - Extension
35	Register Mobile - Extension CLI
36	Active Mobile Hunt
37	Voice Msg Wait Notice to Mobile Extn
41	Wake-up Time Registr (1-time/Cont)
42	Wake-up Time Cancel
43	Active Conference Room
44	Deactive Conference Room
51	Pre-selected Msg Activation
52	Set Custom Message
61	Record VMIB User Greeting
62	Listen VMIB Time & Date

Fixed Code	Feature
63	Listen VMIB Station Number
64	Listen VMIB Station Status
65	Record VMIB Page Message
66	Erase VMIB User Greeting
67	Erase VMIB Page Message
68	Outbound Notify
69	Outbound Number
71	LCD Display Mode (Keyset)
72	MPB Version Display (Keyset)
73	Background Music (Keyset)
74	Station User Name Registration
75	Headset/Spkrphone Mode (Keyset)
76	Headset Ring Mode (Keyset)
78	Serial #/SW Pkgs (Keyset w/ LCD)
79	PC – Phone Lock Key
451	Call Coverage Mode
452	Call Coverage Delay Ring Cycle
**	Hot Desk Logout
*0	Hot Desk Login
*1	Relocation Out
*2	Relocation In
6#	Erase User Name
6*	Record User Name

Flexible Button Programming Codes

Flexible Button	Prog Code
Account Code Activation	80
ACD STATUS BTN Assignment	8*
Attendant DND (Networking Only)	55
Authorization Code Change	32
Authorization Code Registration	31
Background Music	73
Call Log Display	57
Call Recording via USB (*n/a in SBX IP*)	9*
CALLBK BTN Assignment (2/8 Btn Keyset)	92
CAMP ON (Queue) BTN Assignment (Attendant)	56
CAMP-ON BTN Assignment	85
CLIR Key	53
CONF BTN Assignment (2/8 Btn Keyset)	91
DID Call Wait	81
DID Restriction	98
Differential Ring	11
DISA Restriction	99
DND/FWD BTN Assignment (2/8 Btn Keyset)	93
Erase VMIB User Greeting	66
FLASH BTN Assignment (2/8 Btn Keyset)	94
Headset Ring Mode	76

Flexible Button	Prog Code
Headset/Speakerphone Mode	75
ICM HOLD BTN Assignment	83
INTRUSION BTN Assignment (System Attendant)	86
Keypad Facility Key (*n/a in SBX IP*)	89
LCD Display Mode (Eng/Domest Lang)	71
Listen VMIB Station Status	64
LOOP BTN Assignment	84
MUTE BTN Assignment (2/8 Btn Keyset)	95
Pre-selected Msg Activation	51
Record VMIB User Greeting	61
REDIAL BTN Assignment (2/8 Btn Keyset)	97
Set Custom Message	52
SPEAKER BTN Assignment (2/8 Btn Keyset)	96
Station COS Down	21
Station COS Restore	22
Station User Name Registration	74
Two Way Recording	54
UCD DND BTN Assignment (+ Hunt Grp No.)	87
Wake-up Time Cancel	42
Wake-up Time Registration (One-time / Continuous)	41
Walking COS	23

Flexible Numbering Plan

The following numbering plan can be changed by ADMIN PROGRAMMING 104-107 depending on the user's needs.

Feature	Flexible Code
1st Door Open	#*1
2nd Door Open	#*2
3rd Door Open	#*3
4th Door Open	#*4
Access CO Line (in 1st avail CO Line Group)	9 (or 0, based on nation code)
ACD Reroute	564
Alarm Reset	565
All Call Page (Int & Ext)	549
Attendant Call	0 (or 9, based on nation code)
Call Forward - SLT	554
Call Parking Locations	601-610
Cancel DND/FWD/Pre-Msg - SLT	559
CO Line Group Access	801-824
Conference Page Join - SLT	58
Conference Room	57
Direct Call Pickup	7
DND (Toggle On/Off) - SLT	553
External Page Zone	545
Flash Command to COL - SLT	551
Group Call Pickup	566
Group Pilot Number	620-629

Feature	Flexible Code
Hold - SLT	560
Individual CO Access	8801-8812
Intercom Call	100-131 (usable)
Internal All Call Page	543
Internal Page Zone	501-510
Last Number Redial - SLT	552
Meet Me Page	544
Msg Wait/Callback Enable - SLT	556
Msg Wait/Callback Return - SLT	557
Night Answer	569
Program Mode Enter Code - SLT	563
Remote MEX Control	#1
Retrieve Held CO Line	8*
Retrieve Held Individual CO Line	8#xx
SMDR Acct Code Enter - SLT	550
Speed Dial Access - SLT	558
Speed Dial Programming - SLT	555
UCD DND	568
US - Conf Timer Extension	##
VM Message Waiting Disable	*9
VM Message Waiting Enable	*8

Station User Programming Codes

The following codes can be programmed by any station user to suit their needs by pressing the TRANS/PGM key, unless noted.

Note: Any item designated with an asterisk (*) is a System Administrative feature only (including any related sub-menus). It is not available for User Programming.

Main Menu	Sub Menu	Options
[1] Ring	[1] Type	1, 2, 3, 4 (digital phone)
	[2] Answer Mode	H:1, T:2, or P:3
	[3] SMS Msg Display	n/a
	[4] Enblock Mode*	1: On, 0: Off
	[5] SMS / Notice Display	n/a
	[6] Scroll Speed	n/a
	[7] Ear-Mic Headset	1: On, 0: Off
	[8] ICM Bell	01-15
	[9] CO Bell	01-15
	[#] PTT Group	n/a
[2] COS*	[1] COS Down	ICM / COS7
	[2] COS Restore	enter authorization code
	[3] Walking COS	enter authorization code
	[4] COS Change	n/a
	[5] SMS Inbox (000/000)	n/a
	[6] Del All SMS Msgs	n/a
[3] Authorize/ Mobile - Ext	[1] Authorize Register	-
	[2] Authorize Change	-
	[3] Register Mobile - Extension	n/a
	[4] Active Mobile - Extension	n/a
	[5] Reg Mobile-Ext CLI	n/a
	[6] Active Mobile Hunt	n/a
	[7] MW to Mobile-Ext	1: On, 0: Off

Main Menu	Sub Menu	Options
[4] Time	[1] Set Wake Up Time	Once, Permanent
	[2] Wake Up Disable	confirm recd: "Erased Wakeup Time"
	[3] Active Conf-Room*	1-9 + password
	[4] Deactive Conf-Room*	1-9 + password
	[5] Call Cover Attr	-
	[1] Call Coverage Mode	1: On, 0: Off
	[2] Delay Ring Cycle	0-9
[5] Message	[1] Set Preselected Message	00-10
	[2] Set Custom Message	None
[6] Announce	[1] Rec User Greeting	-
	[2] Listen Time / Date	-
	[3] Listen Sta Number	-
	[4] Listen Sta Status	-
	[5] Rec Page Message	-
	[6] Erase User Greeting	-
	[7] Erase Page Message	-
	[8] Outbound Notify	1:On, 0:Off
	[9] Outbound Number	dial outbound telephone #
	[0] E-mail Notification	1:On, 0:Off
	[*] Record User Name	-
	[#] Erase User Name	-
[7] Supplementary	[1] LCD Display Language	Domestic, English (digital phone)
	[2] MBU Version Display*	-
	[3] BGM*	-
	[4] Register Station Name	(2/8 FLEX/SLT)
	[5] Speaker / Headset	Speaker, Headset
	[6] Headset Ring Mode	Speaker, Headset, Both
	[7] WTU Sta Num Rcvr	n/a
	[8] Serial Number	-
	[9] PC-Phone Lock Button	-
[0] Attendant	-	(ATD only)

Main Menu	Sub Menu	Options
[*] System	[#] Enter Admin*	(ADMIN only)
	[1] Relocation Out*	-
	[2] Relocation In*	-
	[3] Register Bluetooth	(not supported)
	[4] Bluetooth Usage	(not supported)
	[0] Hotdesk Login	-
	[*] Hotdesk Logout	-

Character Entry Chart

Use the chart below to locate the letter, number, and symbol codes that allow you to enter text on a display and create customized messages.

Example: To enter the name MARY, you would use the dialpad to enter the number series:

M = 61, A = 21, R = 73, and Y = 93

. – 13 1 – 10	A – 21 B – 22 C – 23 2 – 20	D – 31 E – 32 F – 33 3 – 30
G – 41 H – 42 I – 43 4 – 40	J – 51 K – 52 L – 53 5 – 50	M – 61 N – 62 O – 63 6 – 60
P – 71 Q – 72 R – 73 S – 74 7 – 70	T – 81 U – 82 V – 83 8 – 80	W– 91 X – 92 Y – 93 Z – 94 9 – 90
Blank – *1 : – *2 , – *3	 0 – 00	

Quick Start Topics

This chapter provides examples of several of the most commonly used procedures. It includes the following examples:

- Setting up voice mail
- Turning on voice mail notification to a cell phone
- Using the phone to associate CO ringing to a Hunt Group
- CO ringing Hunt Group overflow example
- Auto Attendant Customer Call Routing setup example
- Networking two SBX IP systems
- Remote IP phone setup

Setting Up Voice Mail

This section describes how to set up the optional voice mail card (VMIB) for the SBX IP.

Record a Voice Mail Greeting For Station 101

NOTE: Greetings can only be recorded by phone.

From Station 101:

1. Press PGM, then dial 61 and #.
2. Record the greeting.

When you are finished recording:

3. Press Hold/Save to end and save the recording.
4. Press Hold/Save when finished.

Using The Phone to Set Password And Forward Settings

Set Up A Password For Station 101

NOTE: Passwords must be different for each station. In addition, passwords must also be numeric (vs. alphanumeric).

From Station 101:

1. Press PGM, then dial 31.
2. Enter a 5 digit password.
3. Press Hold/Save to store the password.

Program Station Forwarding

Checking/changing the Current Forward Setting

1. Log into any Admin Station.
2. Press PGM, then dial 111.
3. Dial the station range 101101.
4. Press Flex Button 2 to see the current forward setting.
   The default setting for forwarding is "ON".
   If the Forward setting is turned ON, then skip to step 6.

If the Forward setting is turned OFF:

5. Dial 1 to turn on fwd capability.
6. Press Save to store the setting.

Checking/changing Forward To Voice Mail Setting

1. Log into any Admin Station.
2. Press PGM again, then dial 113.

Check/change VMB1

If you want to set the Forward option to forward calls to voice mail, you need to make sure the VMB Access feature is set to ON.

3. Dial the station range 101101.
4. Press Flex Button 2 to hear the current VMB1 setting.
   The default setting for VMB1 is "ON".
   If the VMB1 Access setting is turned ON, then skip to step 6.

If the VMB1 Access setting is turned OFF:

5. Dial 1 to turn on VM1B Access.
6. Press Save to store the setting. Now you can turn on Auto Forward to VMB1 (see next page).

Check/change Auto Forward To VMB1

After you make sure that VMB1 Access is turned on (see steps 3 & 4), you can then set the Auto Forward feature.

7. Press Flex Button 14 to hear the current Auto Forward setting.
   The default setting for Auto Forward is "OFF".

If the VMB1 Access setting is turned OFF:

8. Dial 1 to turn on Auto Forward to VM1B.
9. Press Save to store the setting.

   NOTE: The Auto Forward Timer is located in PGM 181, Button 20 and controls the timer for all Stations. The steps to retrieve a voice mail can be found in the User Guide.

10. Repeat the steps for recording a voice mail greeting for VMB1.

Overriding the Forward Set by ADMIN PROGRAMMING

The following procedure allows the user to reset forwarding for any station, thereby overriding the current forward setting made through ADMIN PROGRAMMING.

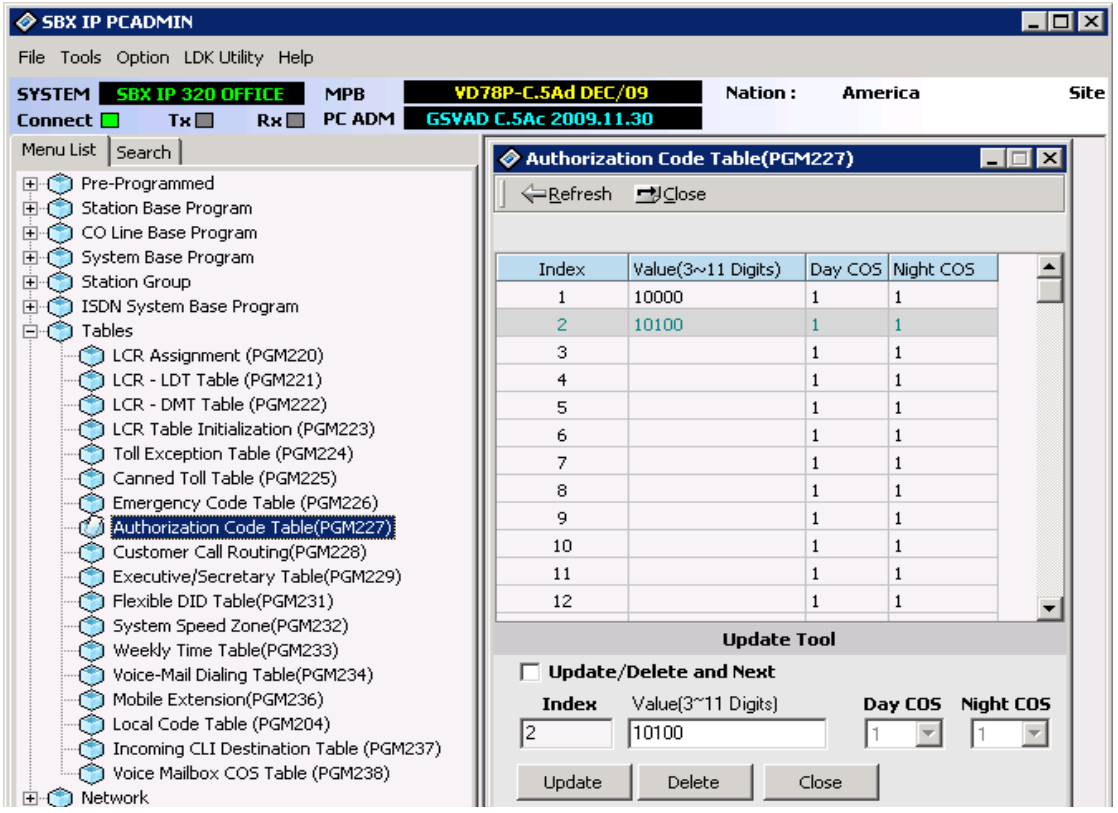
1. Press the Speaker Button or go off hook.
2. Press the DND/FWD Button or the Forward Softkey.
3. Dial 1 (Unconditional fwd).
4. Dial 100 as the destination.

Using the Online Admin Tool to Make Password & Forward Settings

Set Up a Password

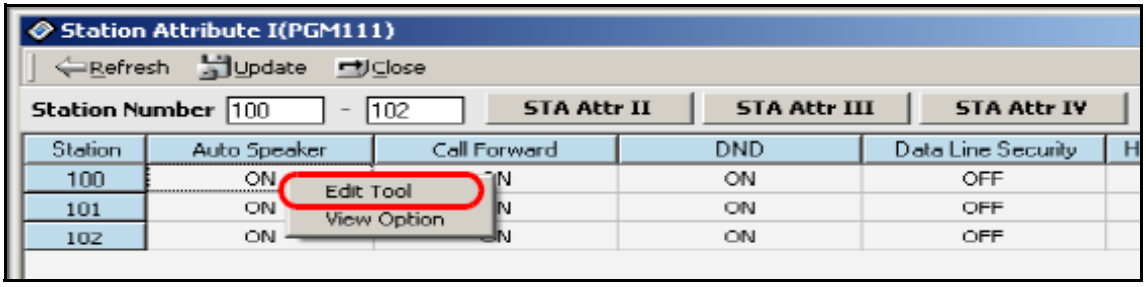
NOTE: Passwords must be different for each station; passwords must be numeric (vs. alphanumeric).

1. Log into the Online Admin Tool.
2. Connect to the KSU.
3. Go to Tables > Authorization Table to display the Authorization table window.
4. Click on the Index Number associated with the station to which you want to assign a password (e.g., Station 100 is Index 1).
5. Right-click on the Index Number, then select Update Tool.
6. Enter a 5-digit password.
7. Click Update to save the password.

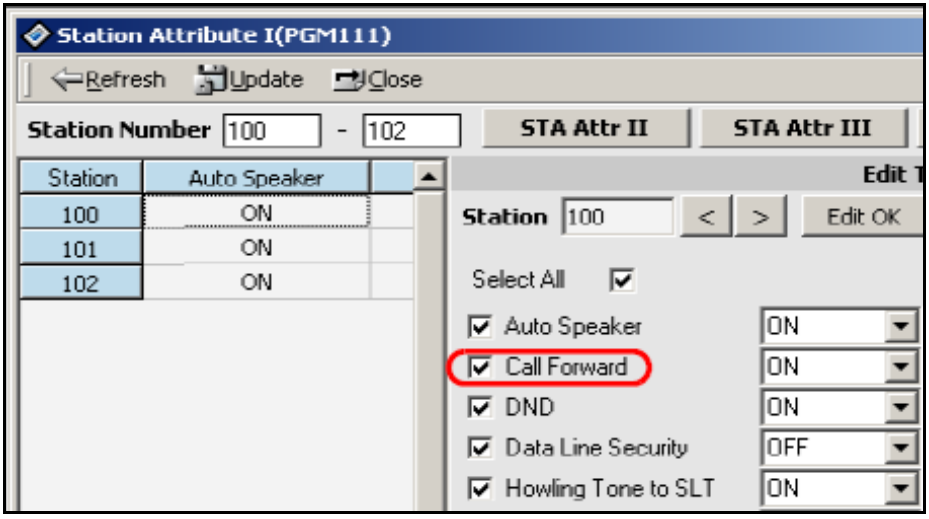


Program Station Forwarding

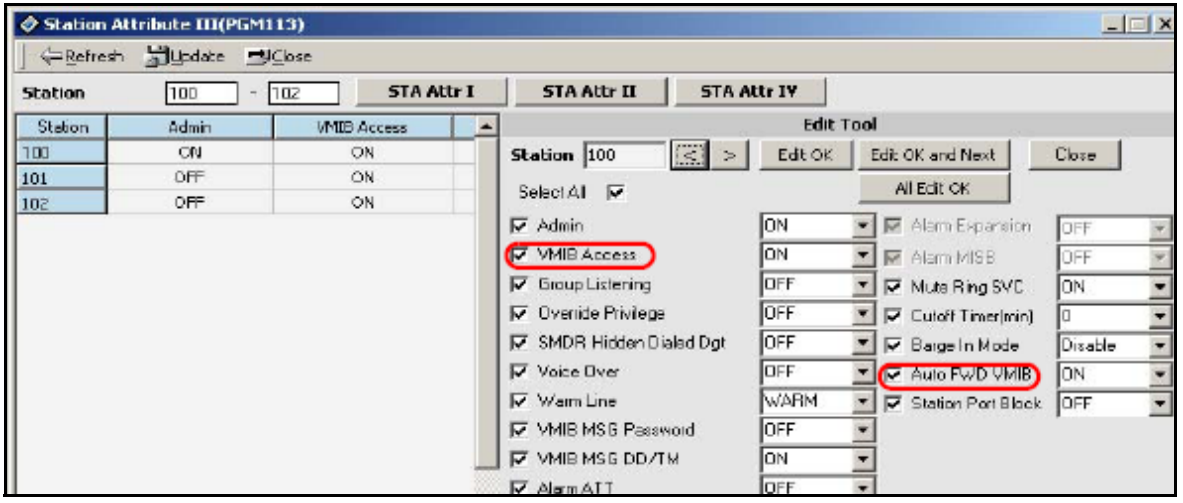
1. Log into the Online Admin Tool.
2. Connect to the KSU.
3. Go to Station Base Programming > Station List to display the Station Attribute window.
4. Enter the Station Range, then click Refresh.
5. Right-click on the station you want to program, then select the Edit Tool.



6. Click STA Attr I.
7. Make sure the Call Forward option is enabled (there should be a check mark in the check box).
   The default setting is enabled (ON); however, if it isn't enabled, click on it to enable it.



8. Click STA ATTR III.
9. Make sure the VMB1 Access option is enabled (a check mark in the check box). The default setting is enabled (ON); however, if it isn't enabled, click on it to enable it.
10. Ensure the Auto FWD VMIB option is enabled (a check mark in the check box). The default setting is disabled (OFF); if it isn't enabled, click on it to enable it.
11. Click Update to store the changes.



General Information about Voice Mail

- When a voice mail message is waiting, the Message Waiting Indication continues and the Callback Button light continues to flash.
- The Message Waiting Indication can be extinguished by saving or deleting any messages in the VMIB.
- To Save a Message, press Next during the message (24-button phone) and Hold (8-button phone).
- You can access a VMB remotely (either outside or inside) from the greeting of any VMB by pressing the * key and entering the password for that VMB. From outside the system, you must dial a Station that is forwarded to a VMB. Internally you may dial a Station that is forwarded to a VMB or press the Callback Button on any Station showing a MWI.

  NOTE: To access VM via the Callback Button, there must currently be messages waiting.
- To access voice mail from an SLT, go off hook and dial 557.

  NOTE: The 557 code only works on SLTs.

Turn On Voice Mail Notification to a Cell Phone

1. Press Trans/PGM.
2. Dial 68.
3. Dial 1 (to turn on notification).
4. Press Save.
5. Press Trans/PGM.
6. Dial 69.
7. Enter the telephone number you wish notified.
8. Press Save.

When a voice mail is received for that station, the system will call the notification number. If answered, the called party will be allowed to retrieve their voice mail.

Using the Phone to Associate CO Ringing to a Hunt Group

Creating A Ring Group

You can log in to Admin on Station 100 (or any admin station) and create a Ring Group 620 with member Stations 100-101 using the instructions below:

From any Admin Phone Station:

1. Log in as an Administrator.
2. Press PGM, then enter 190 (for Station Group Programming).
3. Enter 620 (for Group Number).
4. Press Flex Button 1.
5. Enter 4 (for Group Type), then press Save.
6. Press Flex Buttons 3 (for Group Member Assignment), then 1 (to enter the Group Member for position 1).

   NOTE: You can also program a range on Flex Button 3 by entering the range (e.g., 100101).
7. Enter 100, then press Save.
8. Press Flex Buttons 3, then 2 (to enter Group Member for position 2).
9. Enter 101, then press Save.

Set the Ring Group Attributes

1. Press PGM, then enter 191 (for Hunt Group Attributes).
2. Enter 620 (for Group Number).
3. Press Flex Button 7 (for Overflow Destination).
4. Enter 3 (for VM1B).
5. Enter 01 (for Announcement Number), then press Save.
6. Press Flex Button 8.
7. Enter 020 (for Overflow Timer), then press Save.

Program CO 01-02 To Ring The Hunt Group Days

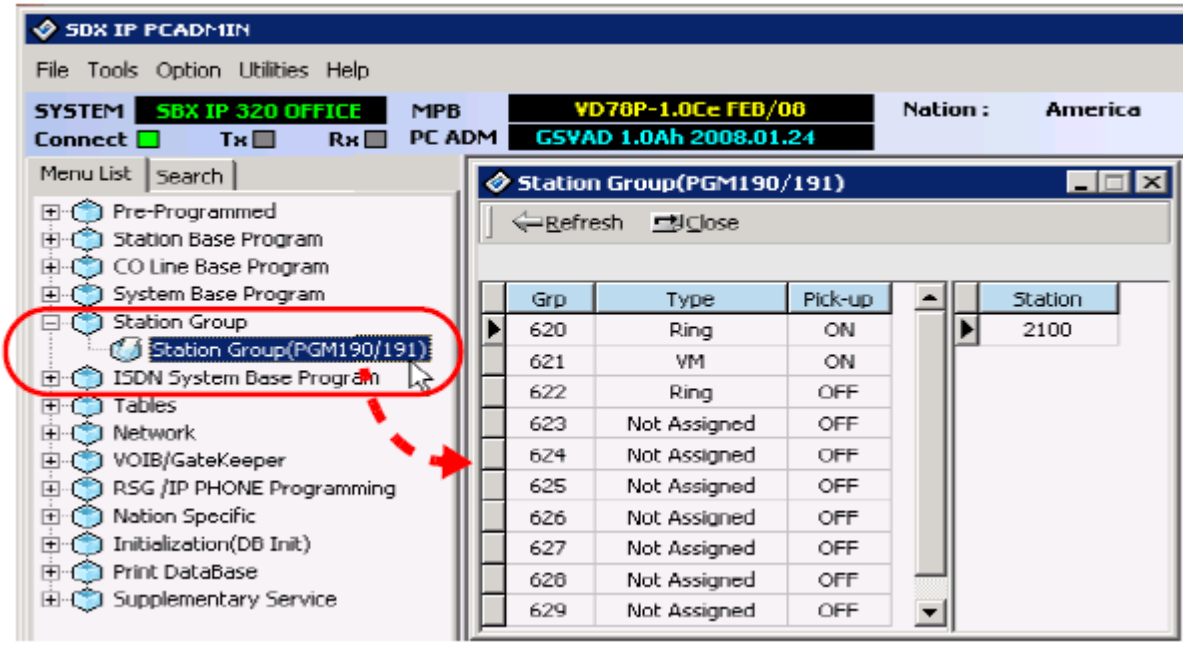
1. Press PGM, then enter 144 (for CO Ringing Assignments).
2. Enter 0102 (for CO Line Range).
3. Press Flex Button 1 (for Day Ringing).
4. Enter 2 (for Type Hunt Group).
5. Enter 620, then press Save.

Change the Forwarding on Hunt Group 620 to VMB 107

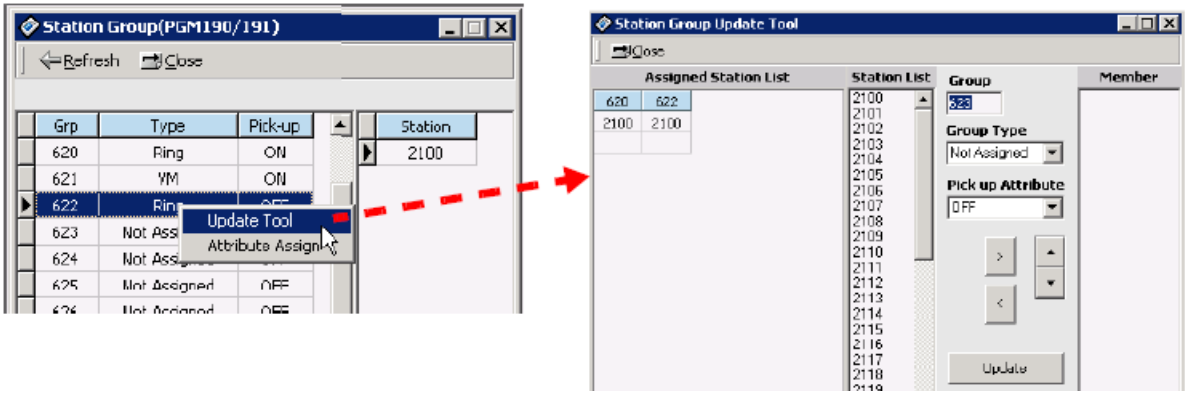
1. Press PGM, enter 191.
2. Enter 620.
3. Press Flex Button 7.
4. Enter 1 (for Station).
5. Enter 101, then press Save.

Using PCAdmin to Associate CO Ringing to a Hunt Group

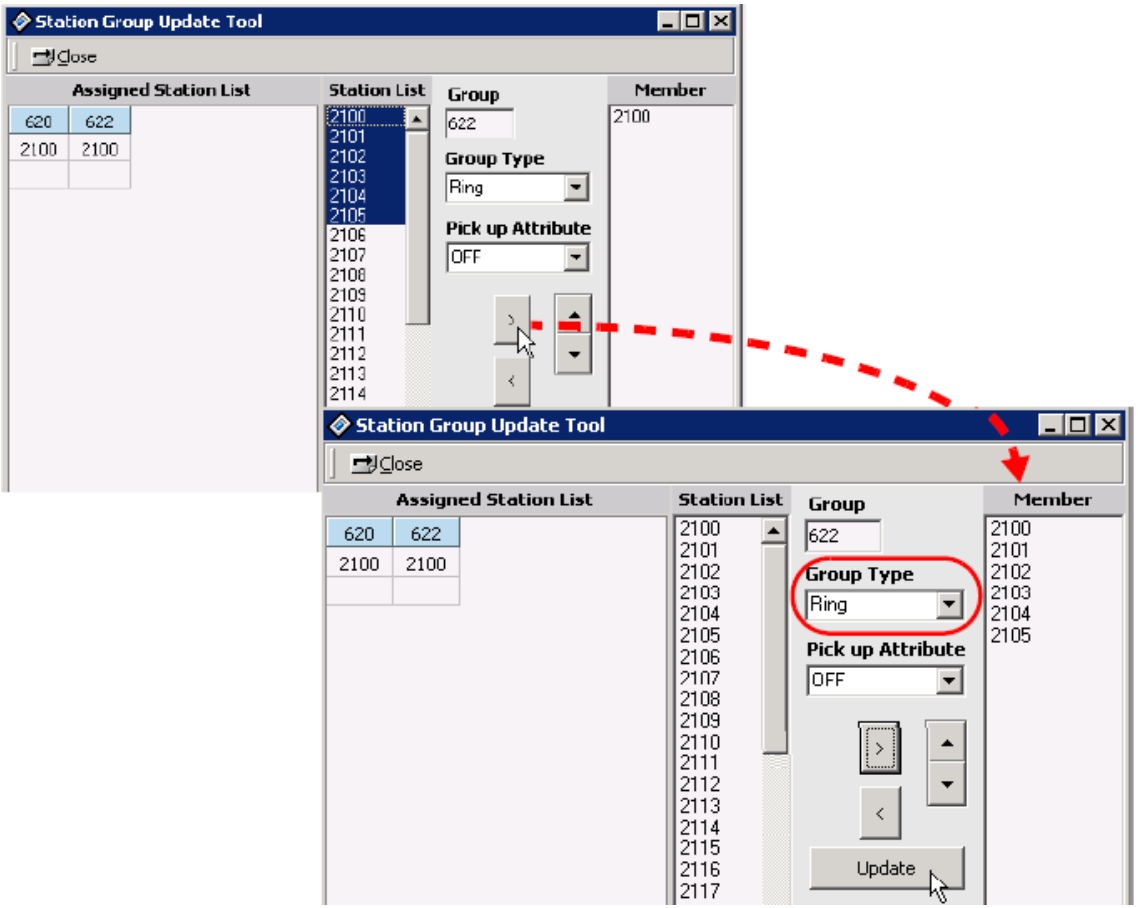
1. Log into the online Admin tool and connect to the KSU.
2. Expand the Station Group option.
3. Double-click on Station Group to display its corresponding window.



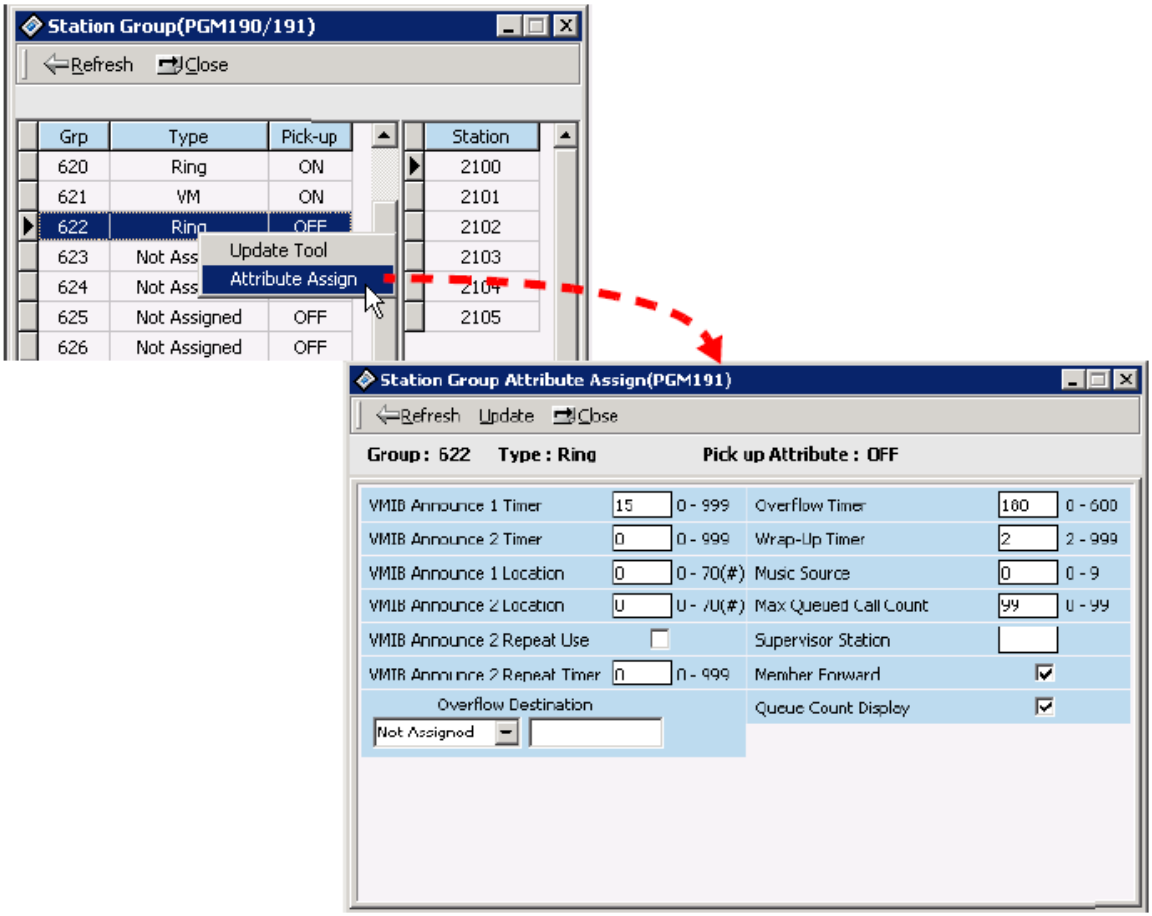
4. Right-click on the Station Group you want to program, then select Update Tool.



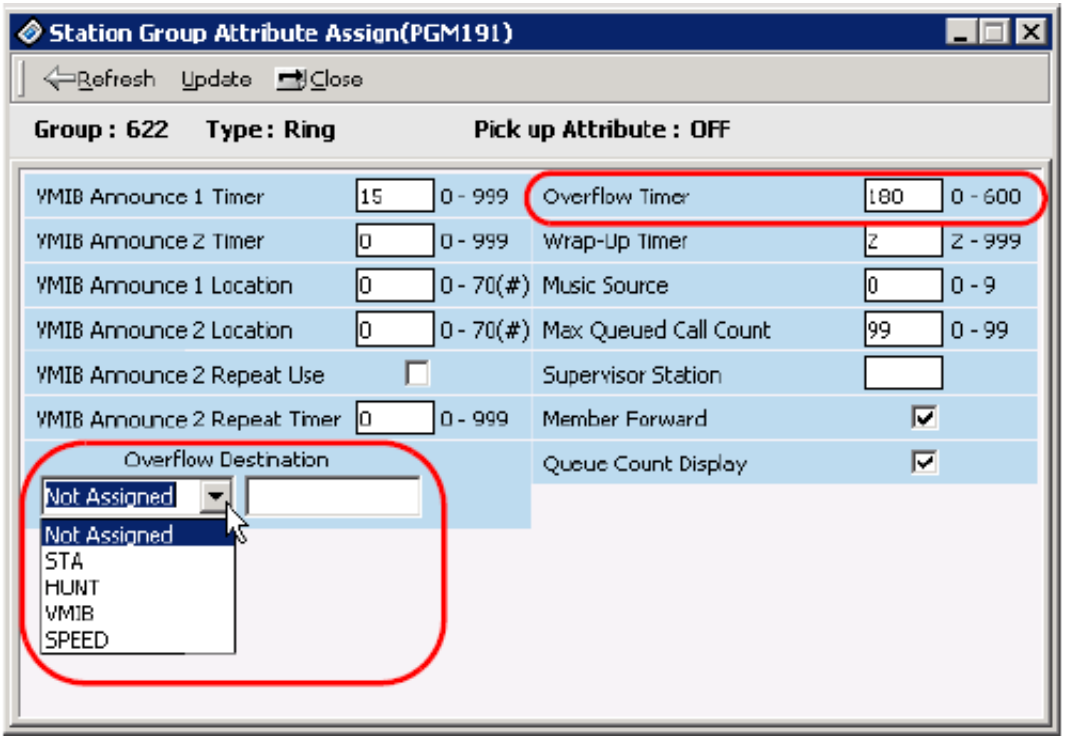
5. Highlight the Station Numbers that you want to add to the Group.
6. Click the “>” (greater than sign) to add to the group.
7. Set the appropriate Group Type.
8. Click Update.



9. Right-click on the Station Group you want to program, then select Attribute Assign to display the Station Group Attribute window.

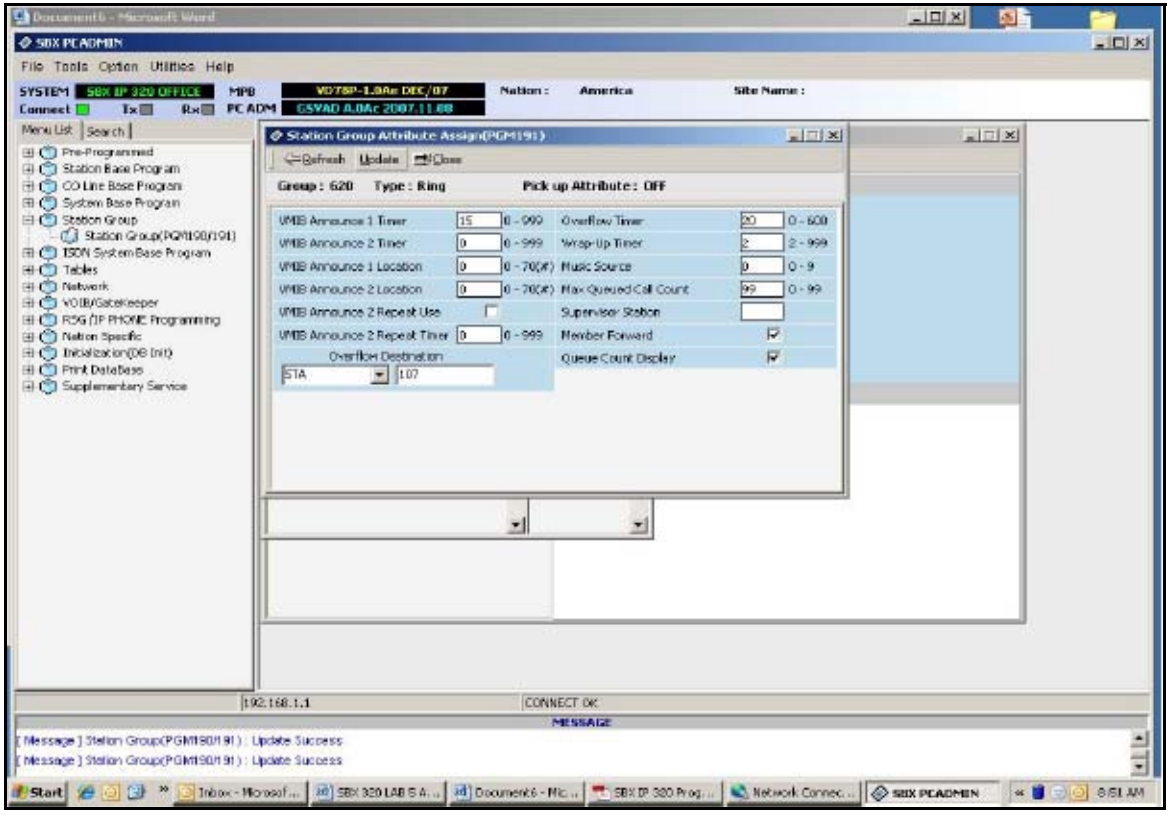


10. Assign the Overflow Destination and Overflow Timer.
11. Click Update.



Change the forwarding on Hunt Group 620 to VMB 107:

12. Right-click on Station Group 620 and Select Attribute Assign.
13. Change the Overflow Destination to Station 107, then click Update.



CO Ringing Hunt Group Overflow Example

Login to Admin on Station 100 (or any admin station) and create a Ring Group 620 with member Stations 100-101 as follows:

1. Press PGM.
2. Dial 190 (Station Group Programming).
3. Dial 620 (Group Number).
4. Press Flex Button 1.
5. Dial 4 (Group Type).
6. Press Save.
7. Press Flex Button 3 (Group Member Assignment).
8. Press Flex Button 1 (to enter the Group Member for position 1).
9. Dial 100.
10. Press Save.
11. Press Flex Button 3.
12. Press Flex Button 2 (to enter Group Member for position 2).
13. Dial 101.
14. Press Save.

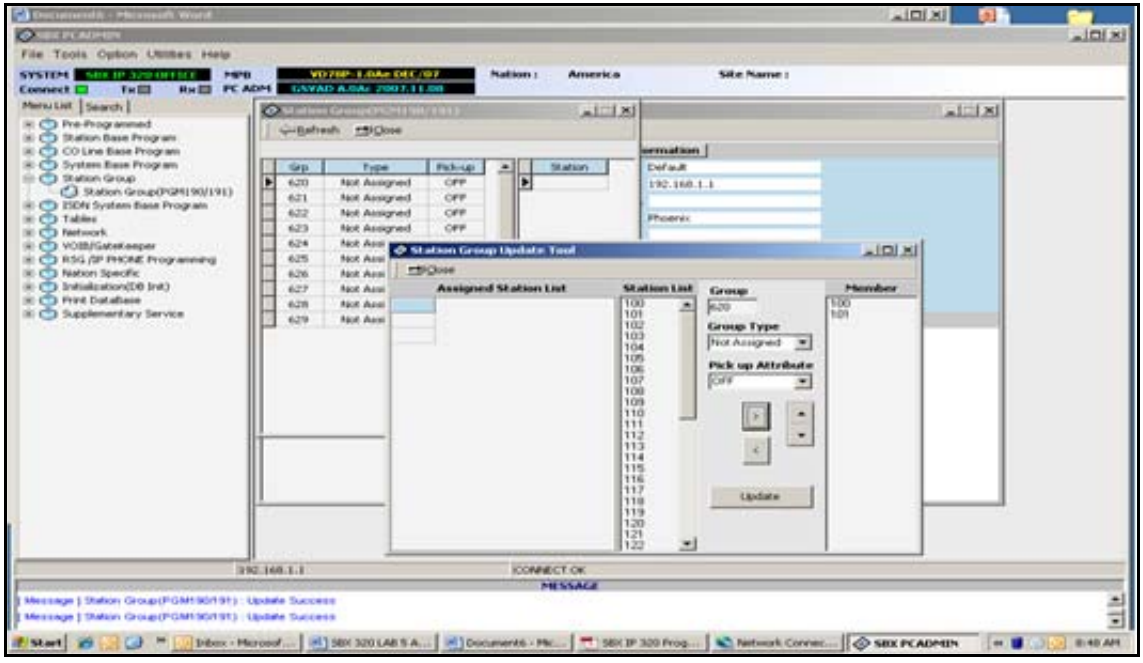
Set the Ring Group Attributes as follows:

1. Press PGM.
2. Dial 191 (Hunt Group Attributes).
3. Dial 620 (Group Number).
4. Press Flex Button 7 (Overflow Destination).
5. Dial 3 (VMIB).
6. Dial 01 (Announcement Number).
7. Press Save.
8. Press Flex Button 8.
9. Dial 020 (Overflow Timer).
10. Press Save.

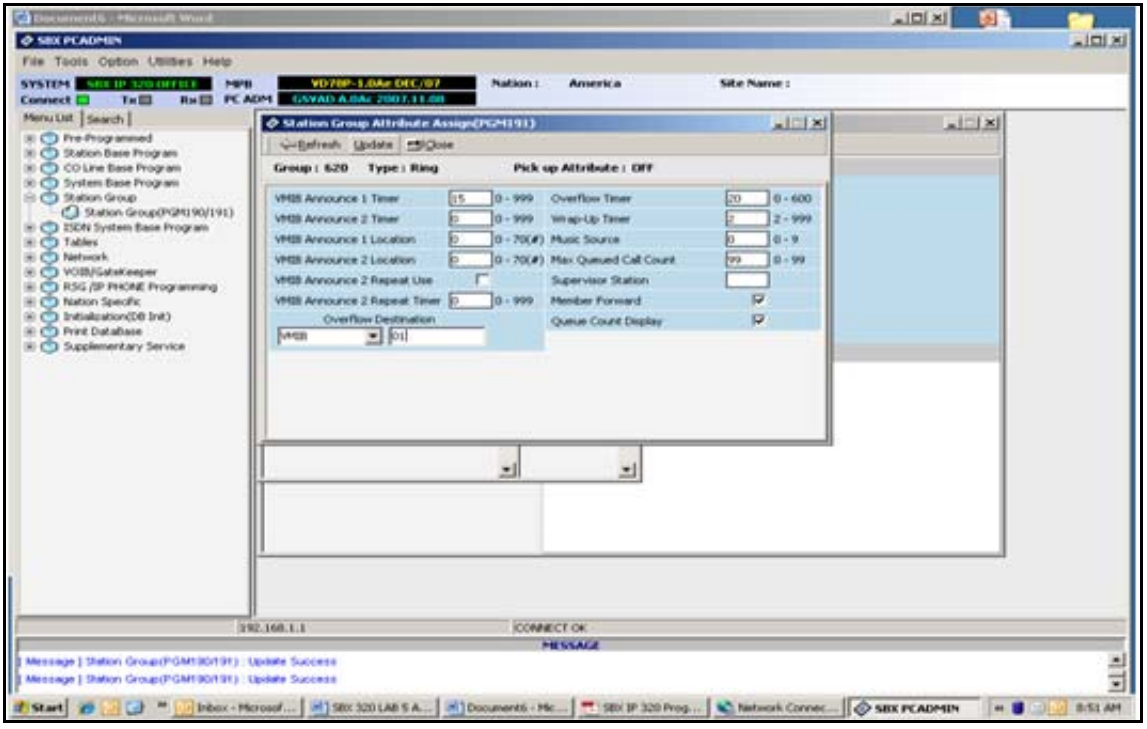
Program CO 01-02 to Ring the Hunt Group Days

1. Press PGM.
2. Dial 144 (CO Ringing Assignments).
3. Dial 0102 (CO Line Range).
4. Press Flex Button 1 (Day Ringing).
5. Dial 2 (Type Hunt Group).
6. Dial 620.
7. Press Save.

Connect to the KSU with the Online Tool. Click the dropdown for Station Group and Select Station Group. Right-click on the Station Group you wish to program and Select Update Tool. Highlight the Station Numbers that you wish to add to the Group and Click the Greater Than Sign to add to the group. Update.



1. Right-click on the Station Group you wish to program and select Attribute Assign.
2. Assign the Overflow Destination, Overflow Timer, and Update.



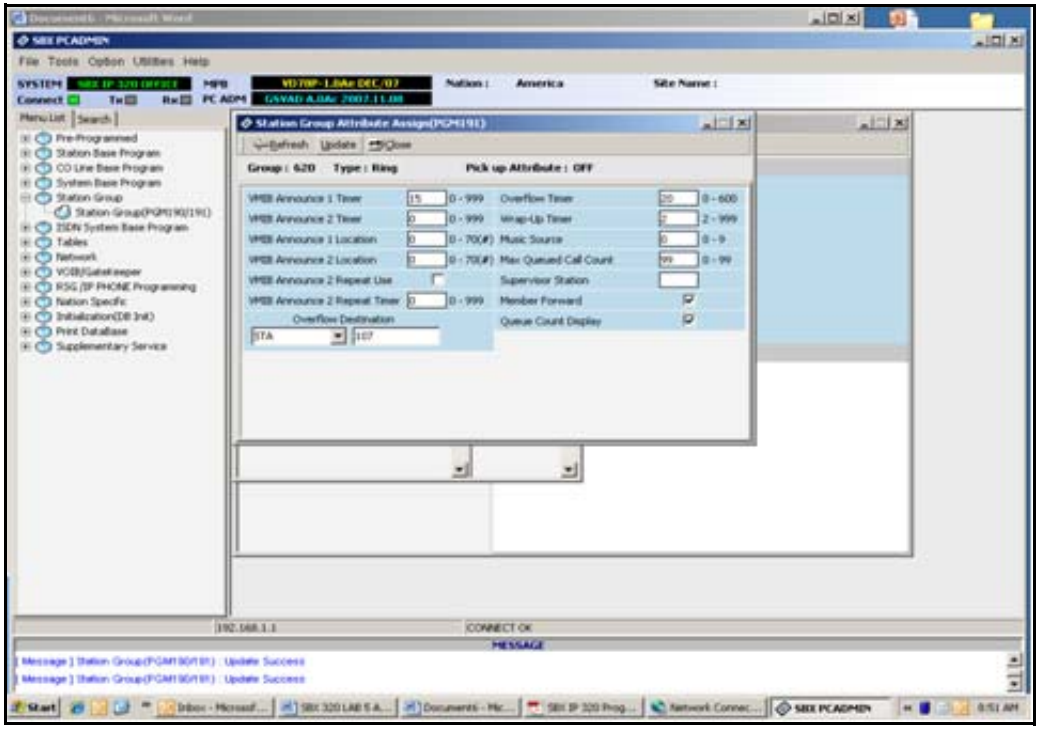
Change the forwarding on Hunt Group 620 to VMB 107 via Phone Admin as follows:

1. Press PGM.
2. Dial 191.
3. Dial 620.
4. Press Flex Button 7.
5. Dial 1 (Station).
6. Dial 101.
7. Press Save.

NOTE: SBX does not provide for overflow directly to a VMB. You must overflow to a station that is forwarded to voice mail. Be sure the station is either auto forwarded or has unconditional forwarding set on the phone.

Using the Online Tool:

1. Connect to the KSU.
2. Select the dropdown for Station Group and Select Station Group.
3. Right-click on Station Group 620 and select Attribute Assign.
4. Change the Overflow Destination to Station 107.
5. Update.



Auto Attendant Customer Call Routing Setup (Example)

Programming Via Phone

Enter ADMIN PROGRAMMING on Station 100 (or any Admin Station). Program the Call Routing (CCR) number that matches the Announcement Number you are using (in this case CCR 01).

From any Admin Station:

1. Press PGM, then enter 228.
2. Enter the CCR Number 01, then press Save.
3. Press Flex Button 1 to assign Key Action 1 (Not Assigned is the default for Extension Start).

To return to default, press Delete, then press Save.

4. Press Flex Button 2 to assign Key Action 2, then enter 01 (for Station) 101 (for Station Number), then press Save.
5. Press Flex Button 3 to assign Key Action 3, then enter 04 (for Play Announcement and Hang up) 02 (Announcement Number), then press Save.
6. Press Flex Button 4 to assign Key Action 4, then enter 05 (for Speed Bin) 2000 (for first System Speed Bin Number), then press Save.

Programming Via PCAdmin

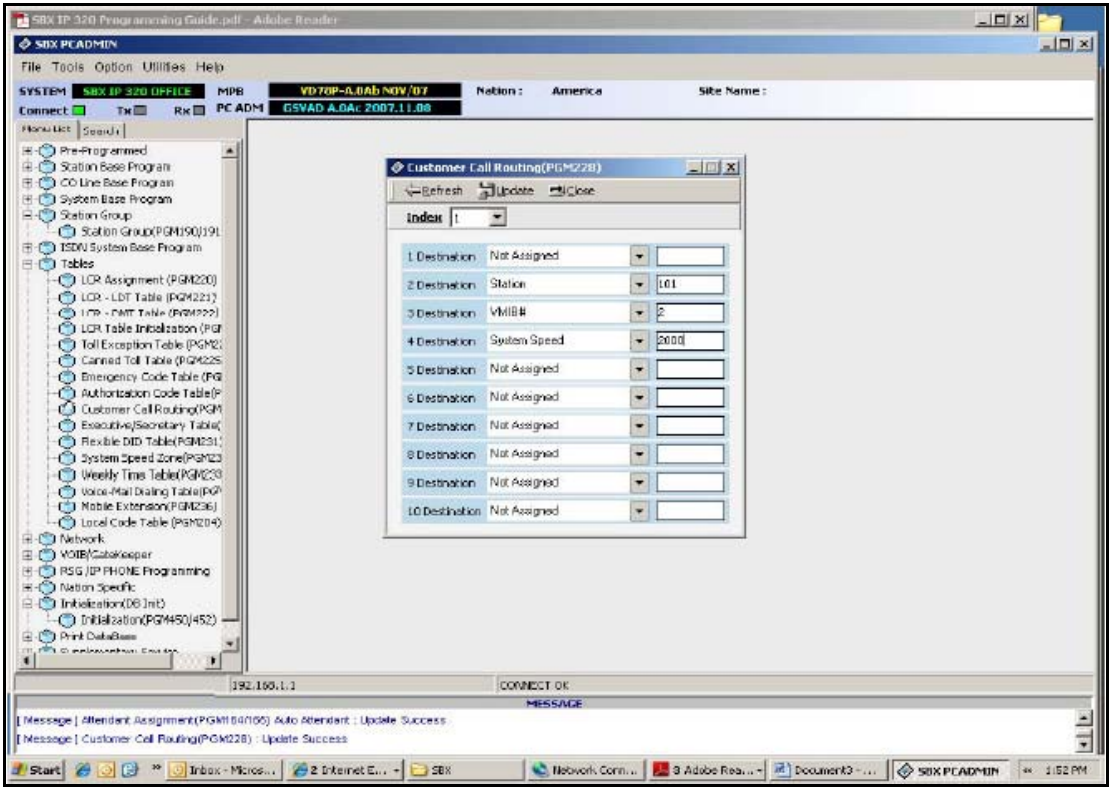
In PCAdmin:

1. Connect to the KSU.
2. Expand the Tables option, then double-click on Customer Call routing from the Menu List.

From the Destination (Key Action) you wish to program:

3. Select the appropriate function.
4. Enter the accompanying information in the field to the right.
5. Once all the applicable information has been selected/entered: click Update, then Close.

NOTE: A destination that is Not Assigned is the same as Extension Start.



Instructions for Recording Greetings and Prompts

Recording AA Greetings

From any Admin Station:

1. Press PGM, then enter 06 (for Record Announcements) and 001 (for Announcement Number).
2. Press #, then begin recording the greeting.
3. Press Hold or Save to end the recording.

NOTE: The prompt you hear will say “If you wish to leave a message press #".

Repeat the steps above to record additional greetings (e.g., Announcement 002).

Recording System Prompts

From any Admin Station:

1. Press PGM, then enter 06 (for Record Announcements), then the designated System Prompt Number.
2. Press #, then begin recording the greeting.
   Review the SBX *IP Programming & Operations Guide* for a list of prompts.
3. Press Hold or Save to end the recording.

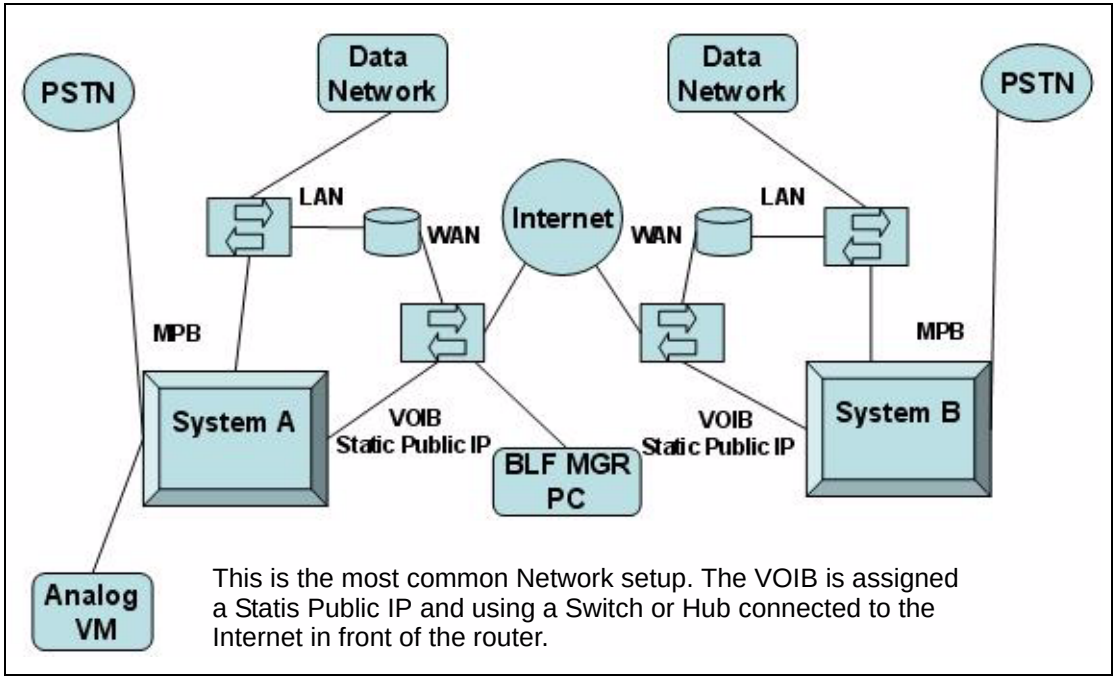
NOTE: It is better to Record a second of dead air over a System Prompt than to delete it.

Networking Two SBX IP Systems

TECH TIP SBX 200809-08a

SBX IP currently supports Networking via VoIP. Requirements are a VOIB card (for each system) and a Network Code Key (for each system). VOIB and KSU Software should be current. If there will be centralized Voicemail an external Analog Voicemail System is required. If they wish to have BLF across the network then a BLF Manager is required.

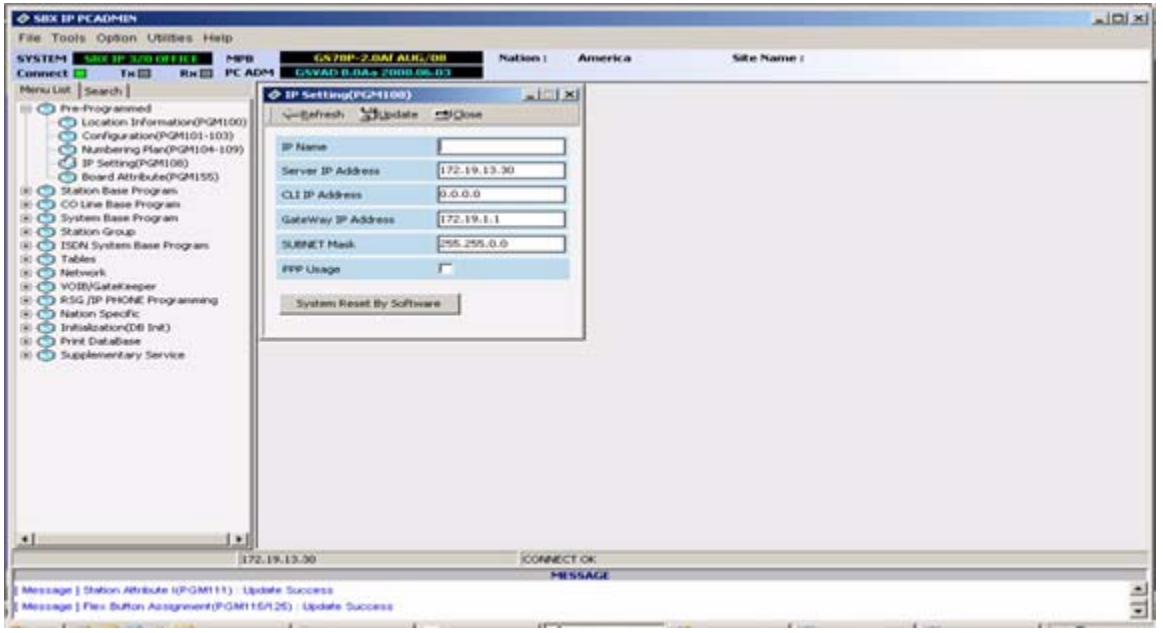
The diagram below is an example of a simple SBX IP network. Normal standards apply in that if there is not a bridged point to point connection (or VPN), then Public IP Addresses must be used.



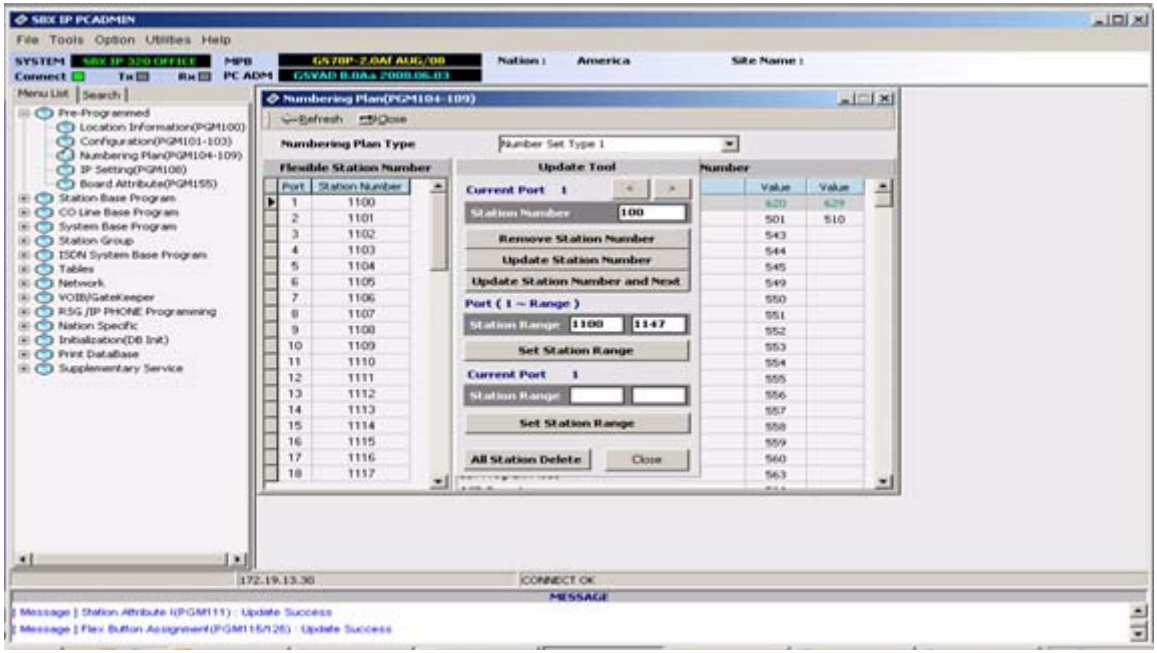
This is the most common Network setup. The VOIB is assigned a Statis Public IP and using a Switch or Hub connected to the Internet in front of the router.

System A Programming

1. Program the KSU IP Address Information:
   Pre-programmed > IP Settings … Update.

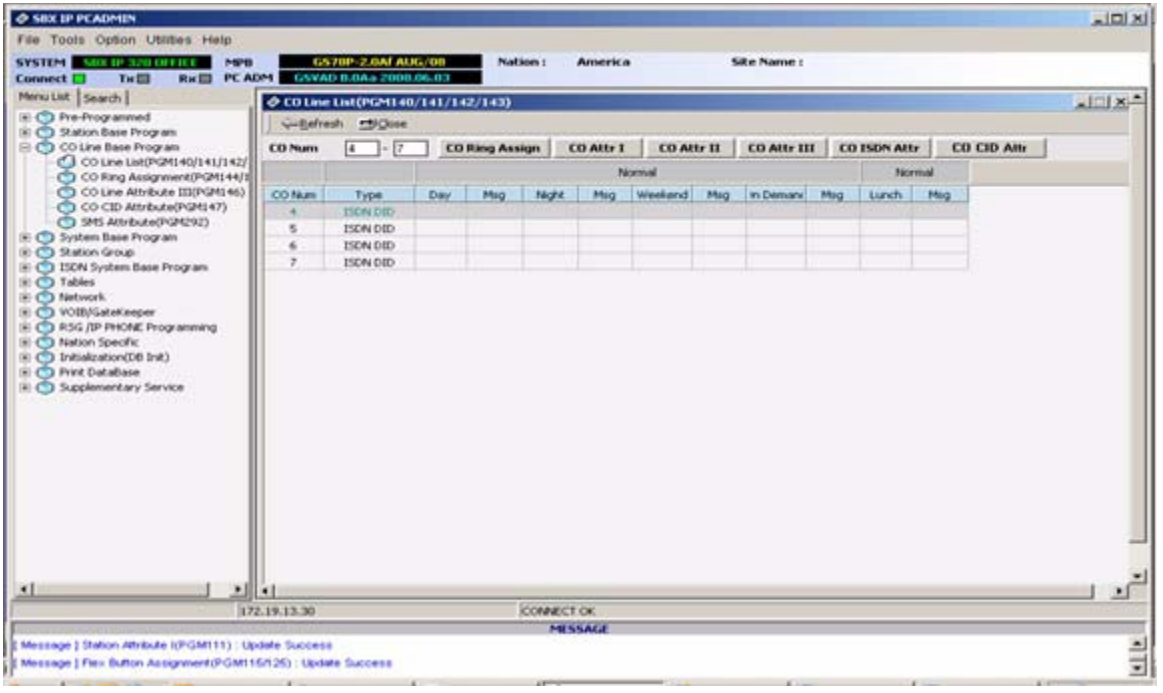


2. Change the numbering plan to 4 digits beginning with 1100:
   Pre-programmed > Numbering Plan > Station Range (set station range).

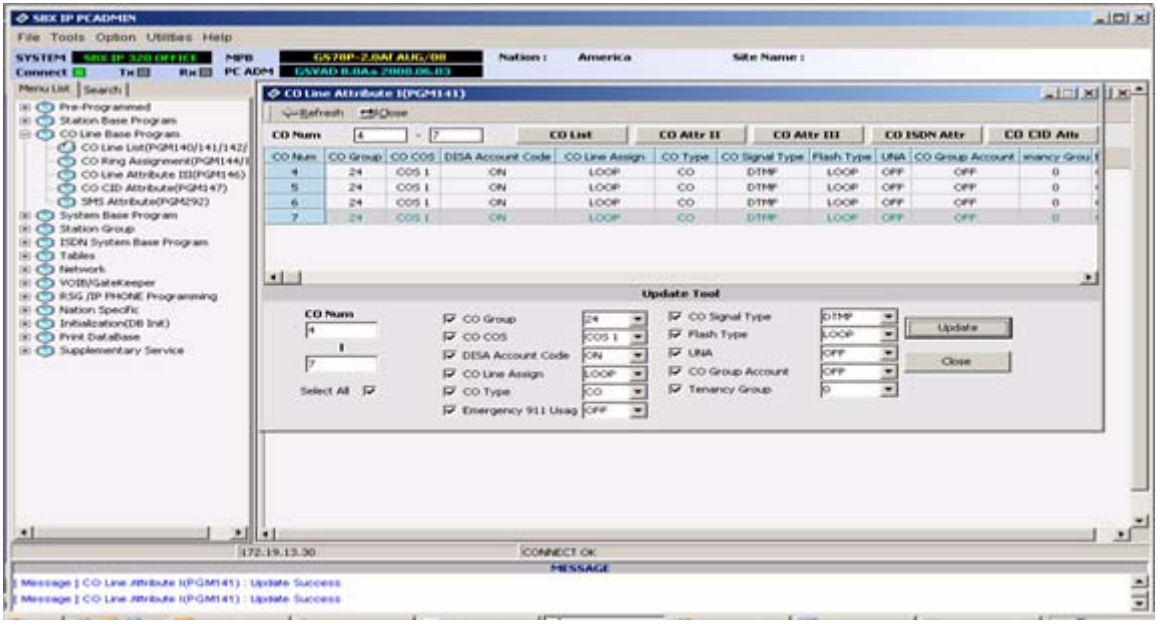


3. Program VOIB CO lines as ISDN DID:
   CO Base Program > CO Line List … Update.

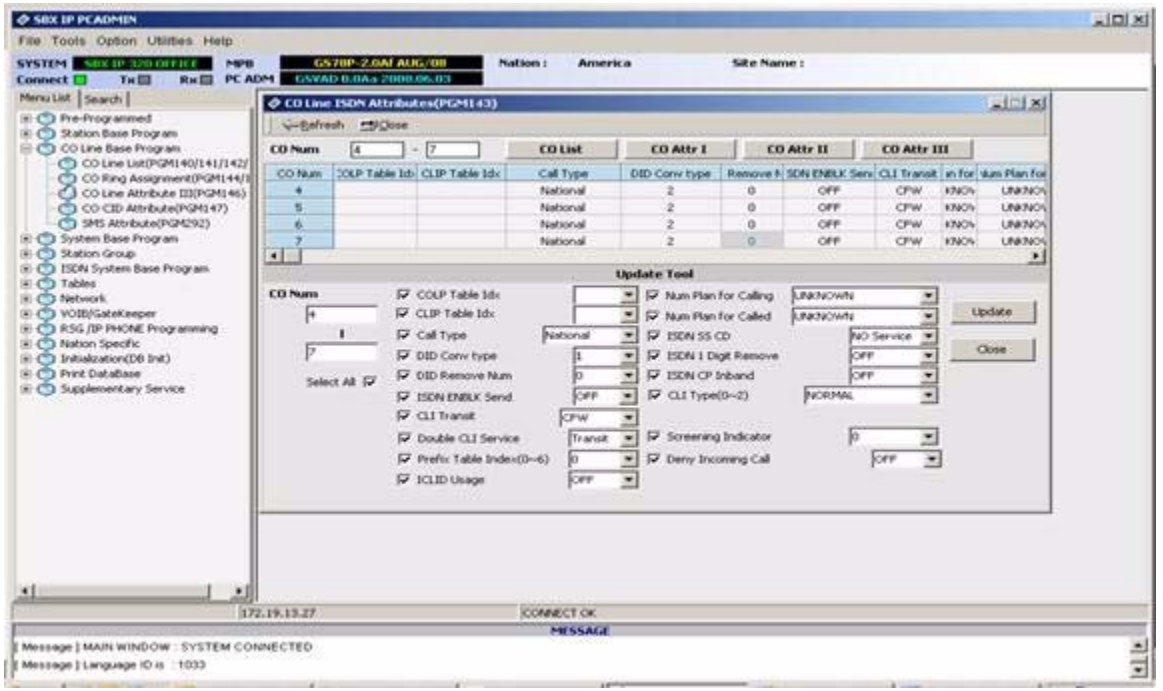
   NOTE: Which CO Lines you program will depend on your Hardware Configuration.



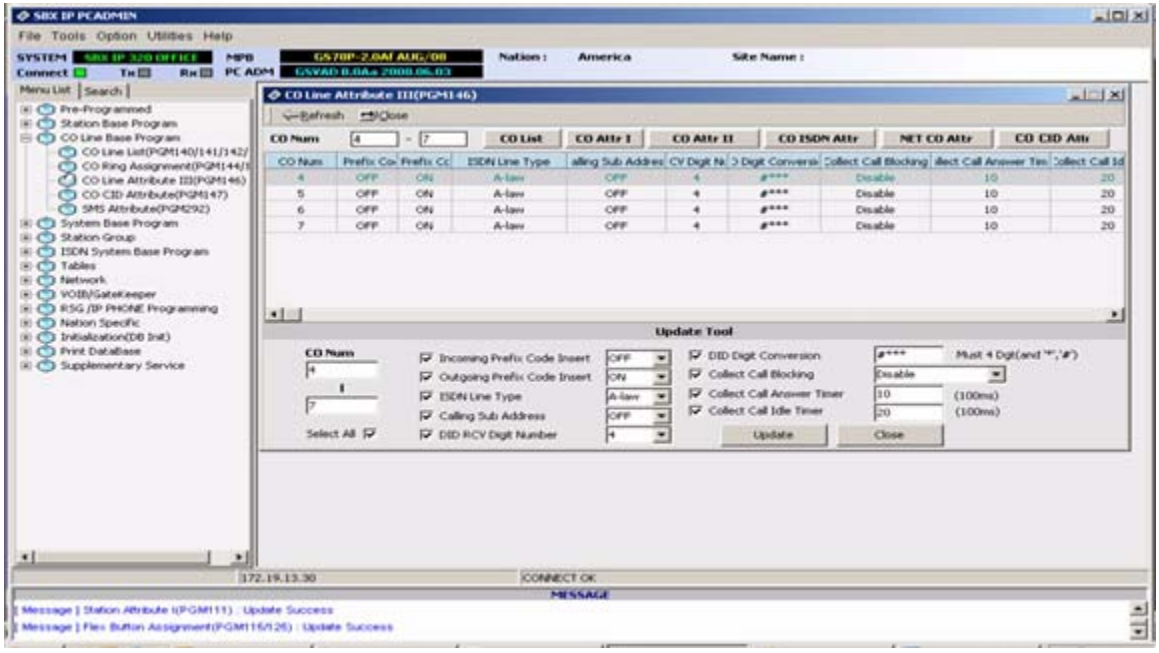
4. If you will be using a Loop Button to access Dialtone for External Calls, you will need to move the VoIP CO Lines to a different Line Group.
   CO Attributes I > Line Group 24 (do not use Line Group 25) … Update.



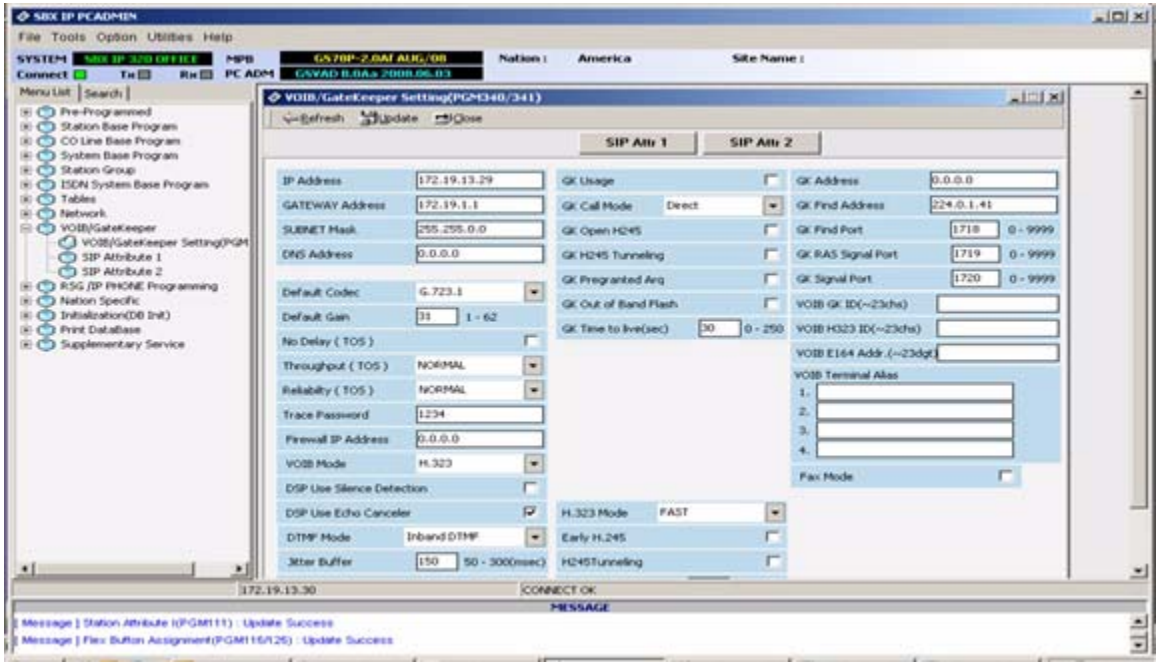
5. Program CO ISDN Conversion Type 1:
   CO ISDN Attributes … Update.



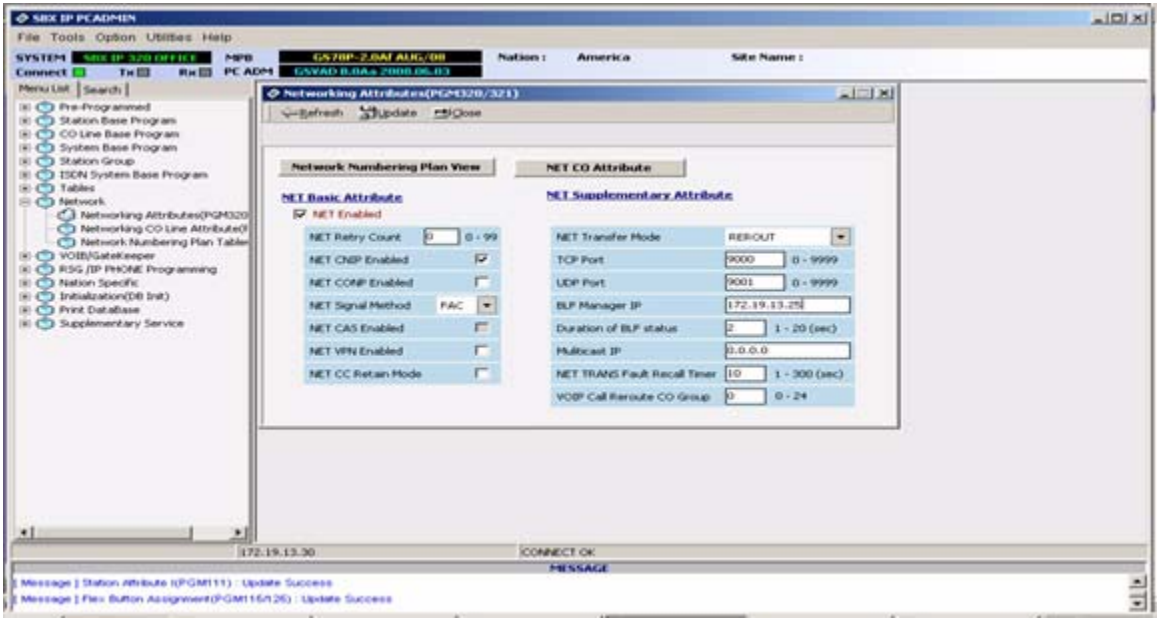
6. Program CO Line Attributes III for VOIP CO Lines for DID Digit Receive Number 4, DID Digit Mask #***.



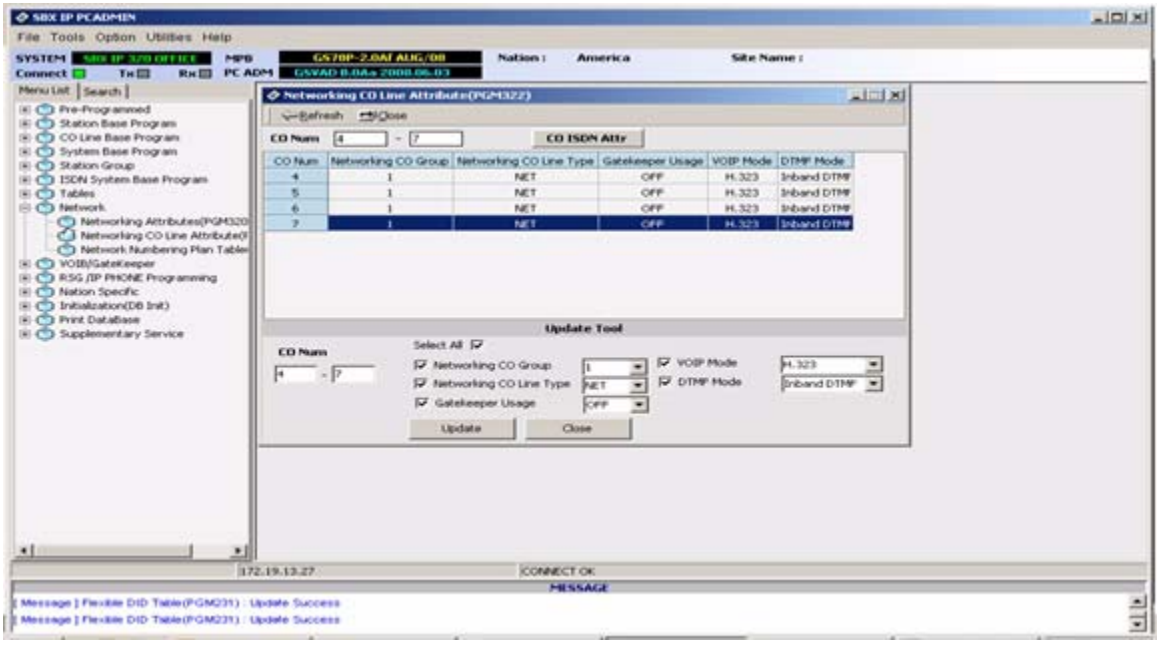
7. Program VOIB Settings:
   VOIB/Gatekeeper > IP Address, Gateway Address, Subnet Mask, DNS Address and VOIB Mode (either H323 or DUAL) … Update.



8. Program Net Enable and BLF Manager Address (if using BLF Mgr): Network > Networking Attributes … Update.



9. Program the VoIP Channels for Networking:
   Network > Network CO Line Attributes > Net CO Group 1, CO Line Type Net> VOIP Mode H323 > DTMF Mode Inband DTMF … Update.

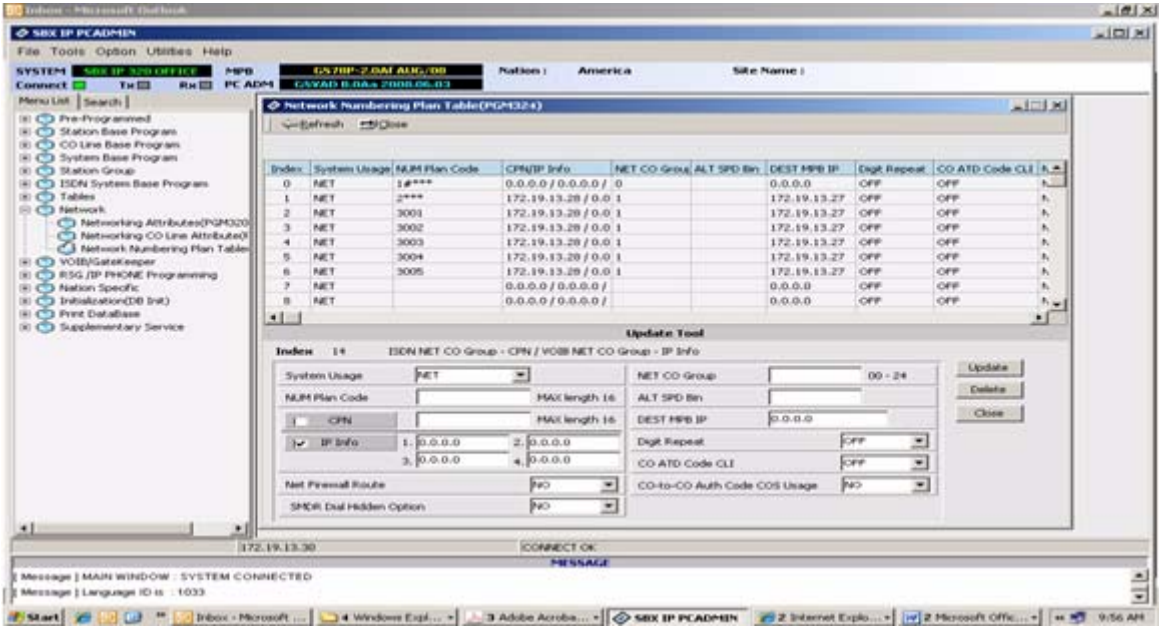


10. Program the Network Numbering Plan:

    Network > Network Numbering Plan Table > Bin 0 System Usage Net, Numbering Plan Code 1#***, Net CO Group 0 (identifies this system), Bin 1 System Usage Net, Numbering Plan Code 2*** Net CO Group 1, DEST MPB Address (System B) CPN IP (IP of System B VOIB) … Update.

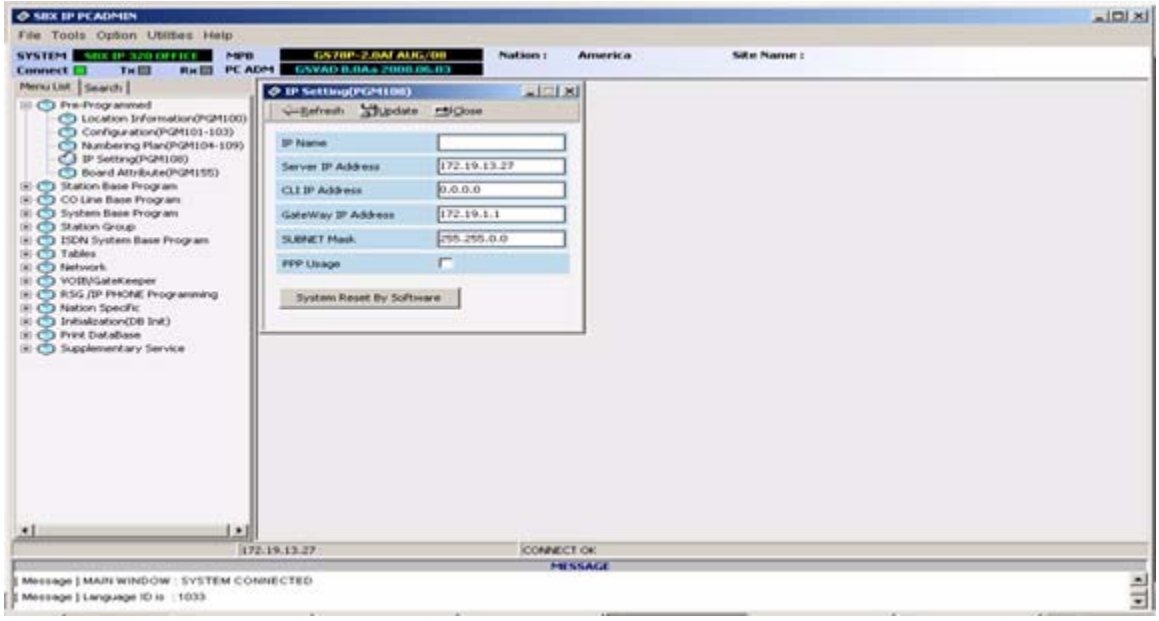
SBX IP PCADMIN
File Tools Option Utilities Help
Network Numbering Plan Table(PGM324)
Refresh
Close
Index System Usage NUM Plan Code CPN/IP Info NET CO Group ALT SPD Bin DEST MPB IP Digit Repeat CO ATD Code CLI
0 NET 1#*** 0.0.0.0 / 0.0.0.0 / 0 0.0.0.0 OFF OFF
1 NET 2*** 172.19.13.28 / 0.0 1 172.19.13.27 OFF OFF
2 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
3 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
4 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
5 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
6 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
7 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
8 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
9 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
10 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
Update Tool
Index 2 ISDN NET CO Group - CPN / VOIB NET CO Group - IP Info
System Usage NET
NUM Plan Code
MAX length 16
NET CO Group
00 - 24
ALT SPD Bin
DEST MPB IP 0.0.0.0
IP Info 1. 0.0.0.0 2. 0.0.0.0 3. 0.0.0.0 4. 0.0.0.0
Digit Repeat OFF
CO ATD Code CLI OFF
Update
Delete
Close
172.19.13.30
CONNECT OK
MESSAGE
[Message] Language ID is : 1033
[Message] LDK ADMIN : Network Numbering Plan Table(PGM324)Idx 2: Update Ok

11. To program Remote Site Feature Access (i.e. Paging):
    - Create a Network Numbering Plan Index using a four-digit number that is NOT in conflict with any Site Numbering Plan.
    - Program the Numbering Plan Code, CPN Info, Net CO Group and DEST MPB IP.
    - Create an Index for each Feature you will access … Update.



System B Programming

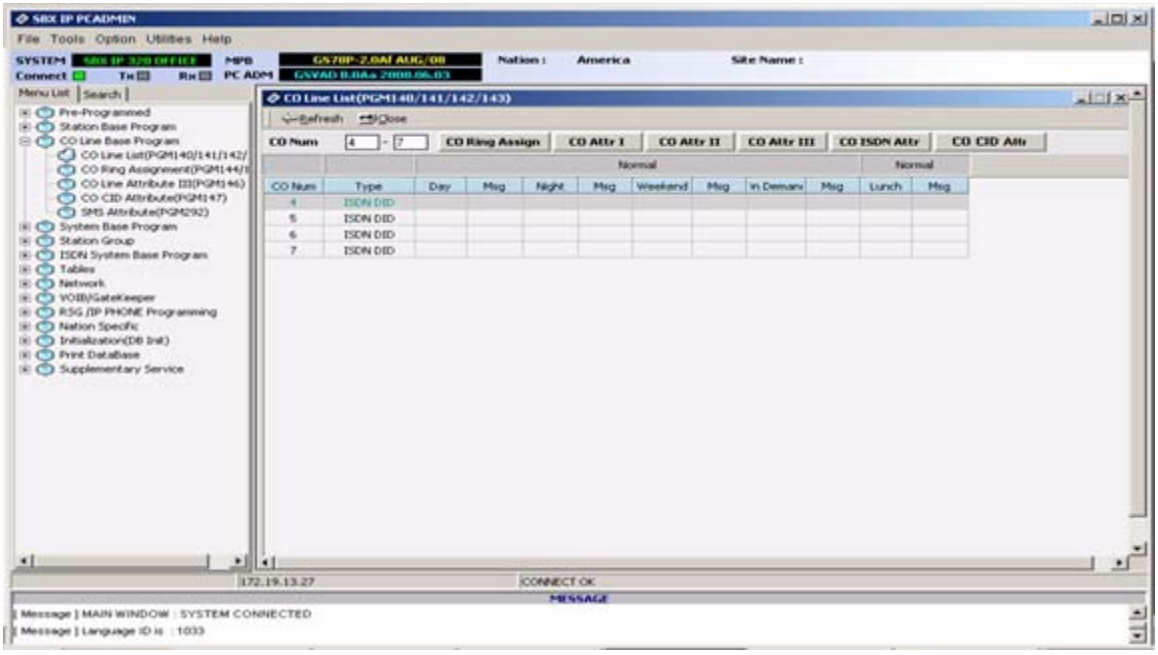
1. Program the KSU IP Address Information:
   Pre-programmed > IP Settings … Update.



2. Change the numbering plan to 4 digits beginning with 2100:
   Pre-programmed > Numbering Plan > Station Range (set station range).

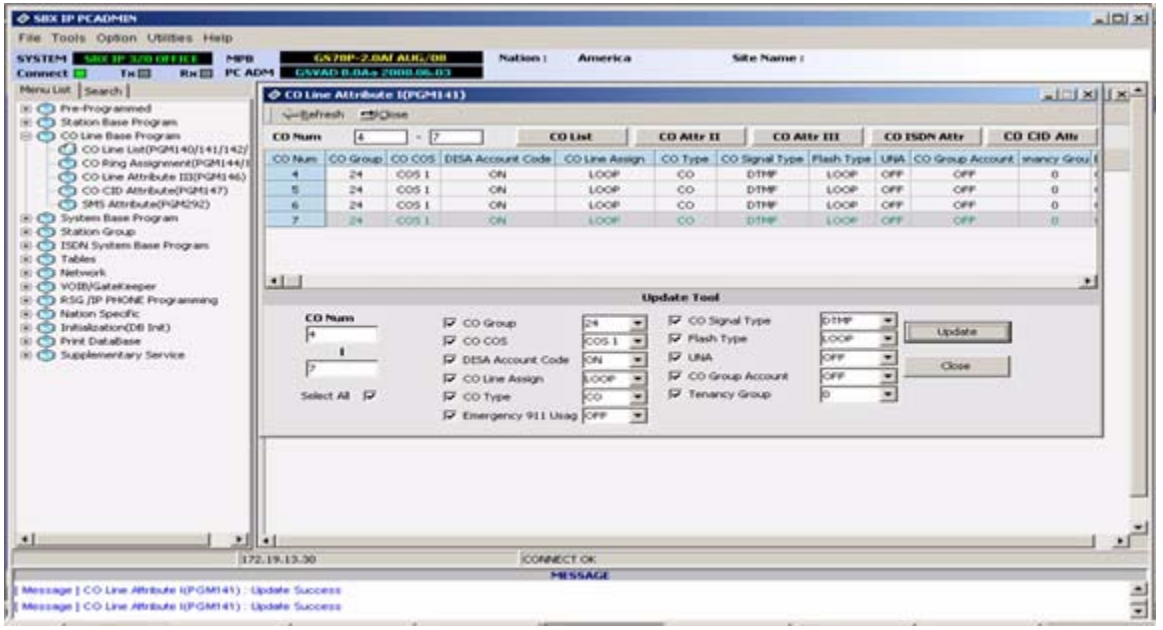
3. Program VOIB CO Lines as ISDN DID:
   CO Base Program > CO Line List … Update.

   NOTE: Which CO Lines you program will depend on your Hardware Configuration.

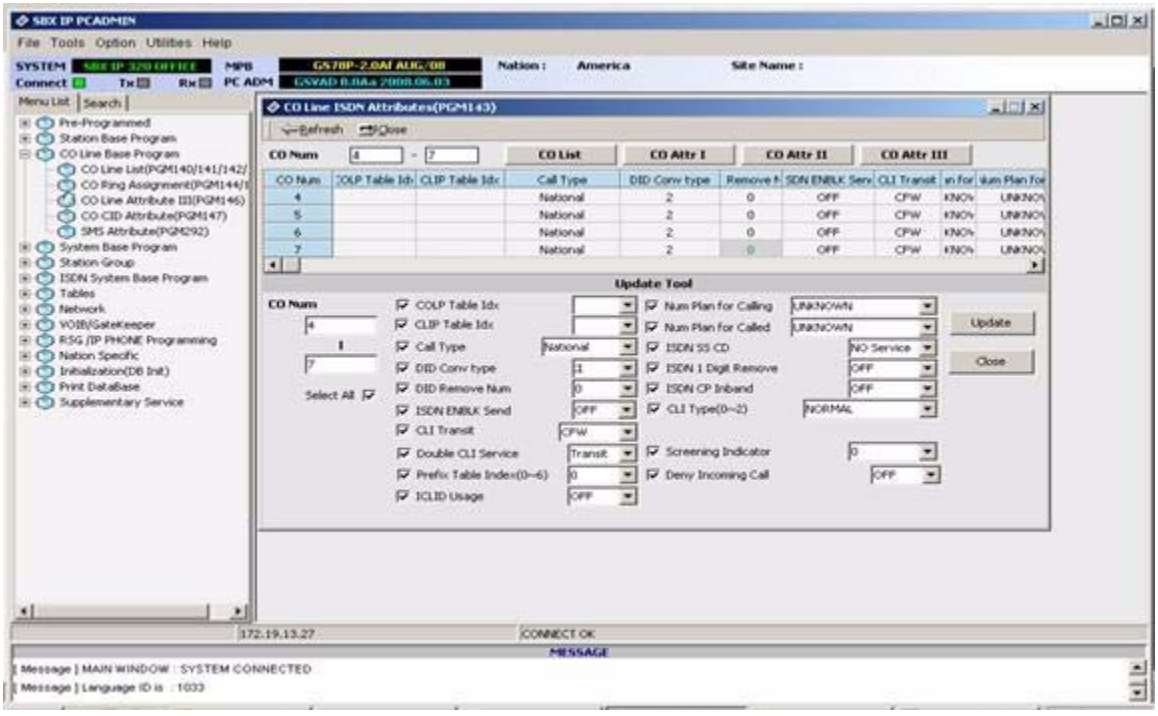


4. If you will be using a Loop Button to access Dialtone for External Calls, you will need to move the VoIP CO Lines to a different Line Group.

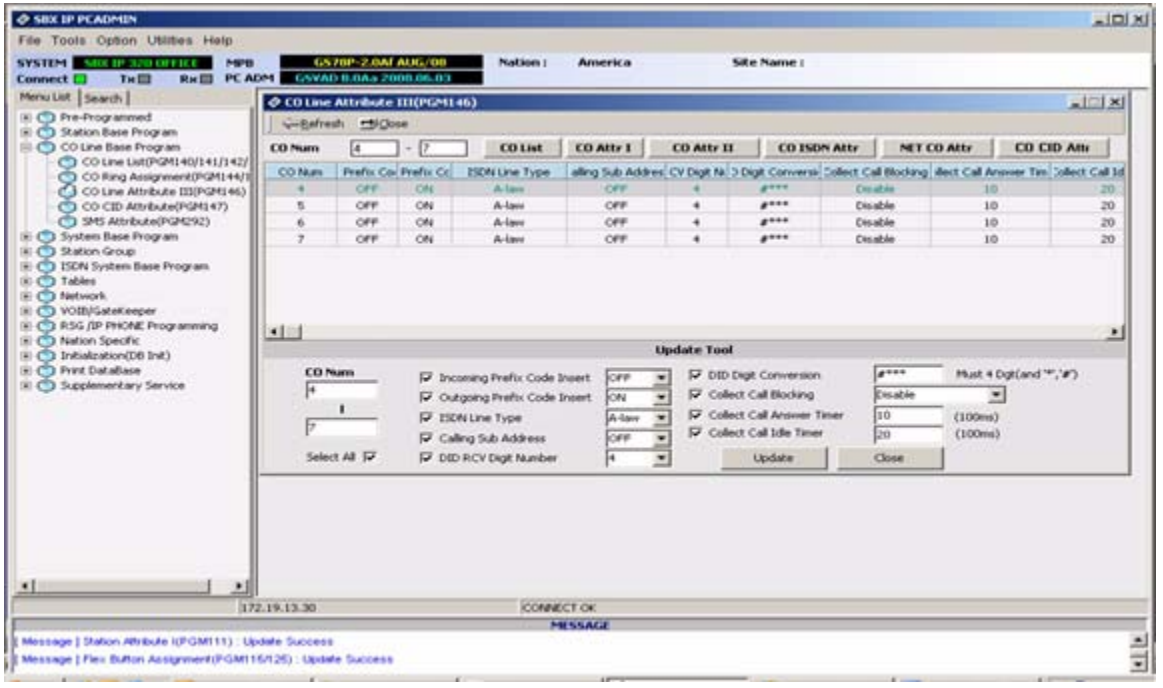
   CO Attributes I > Line Group 24 (do not use Line Group 25) … Update.



5. Program CO ISDN Conversion Type 1:
   CO ISDN Attributes … Update.

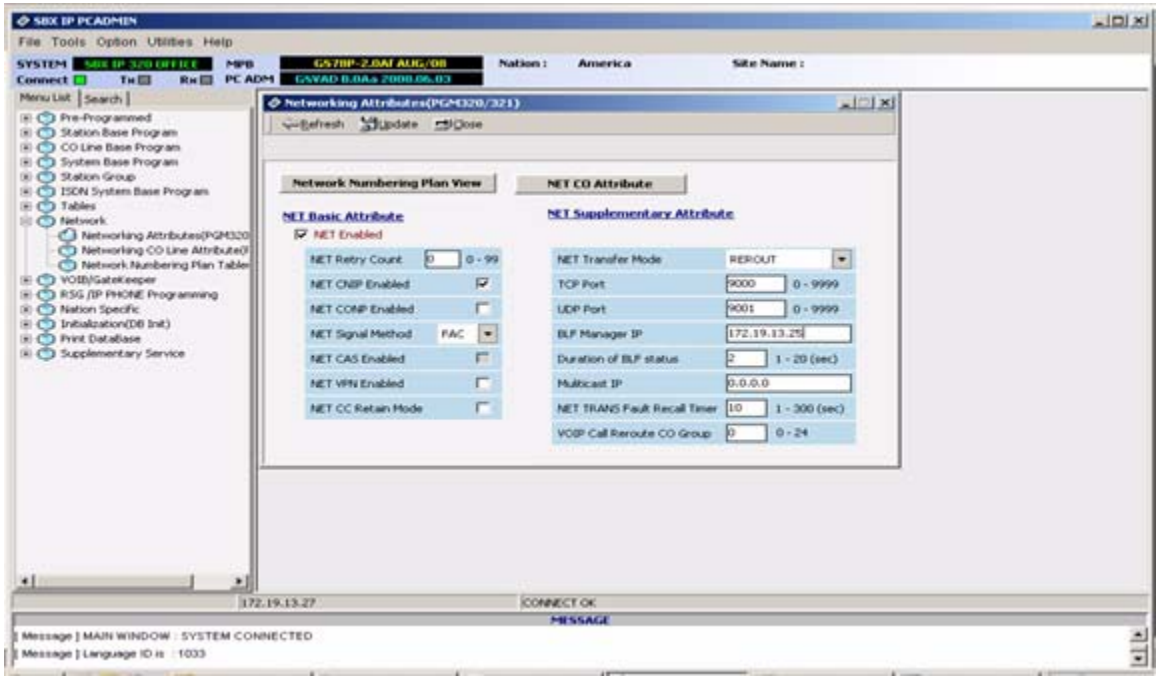


6. Program CO Line Attributes III for VOIP CO Lines for DID Digit Receive Number 4, DID Digit Mask #***.

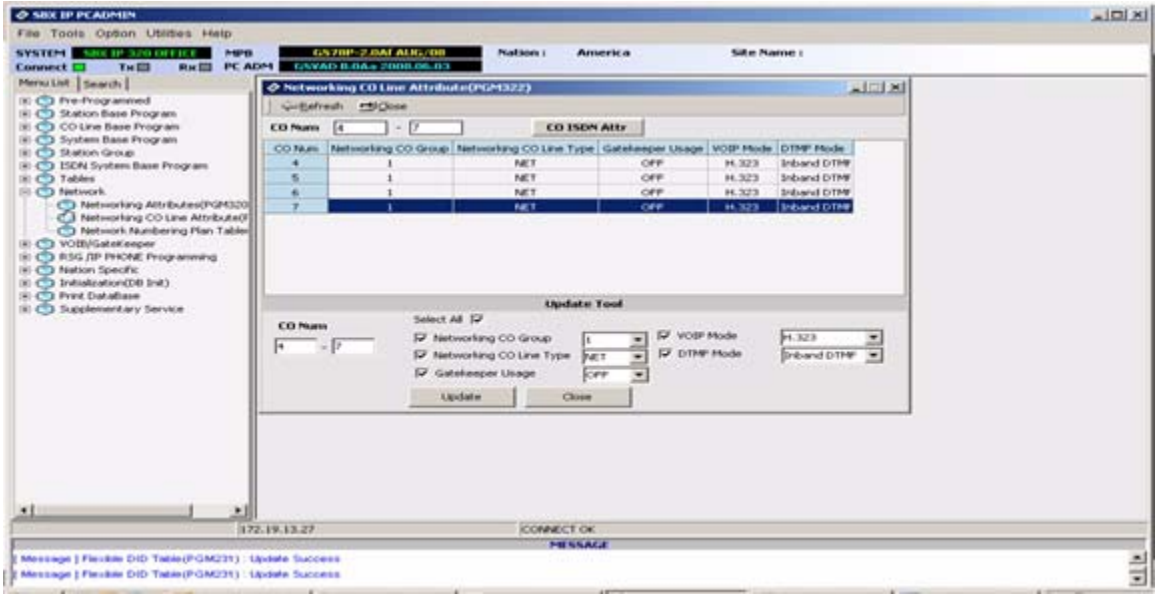


7. Program VOIB Settings:
   VOIB/Gatekeeper> IP Address, Gateway Address, Subnet Mask, DNS Address and VOIB Mode (either H323 or DUAL) … Update.

8. Program Net Enable and BLF Manager Address:
   Network > Networking Attributes … Update.

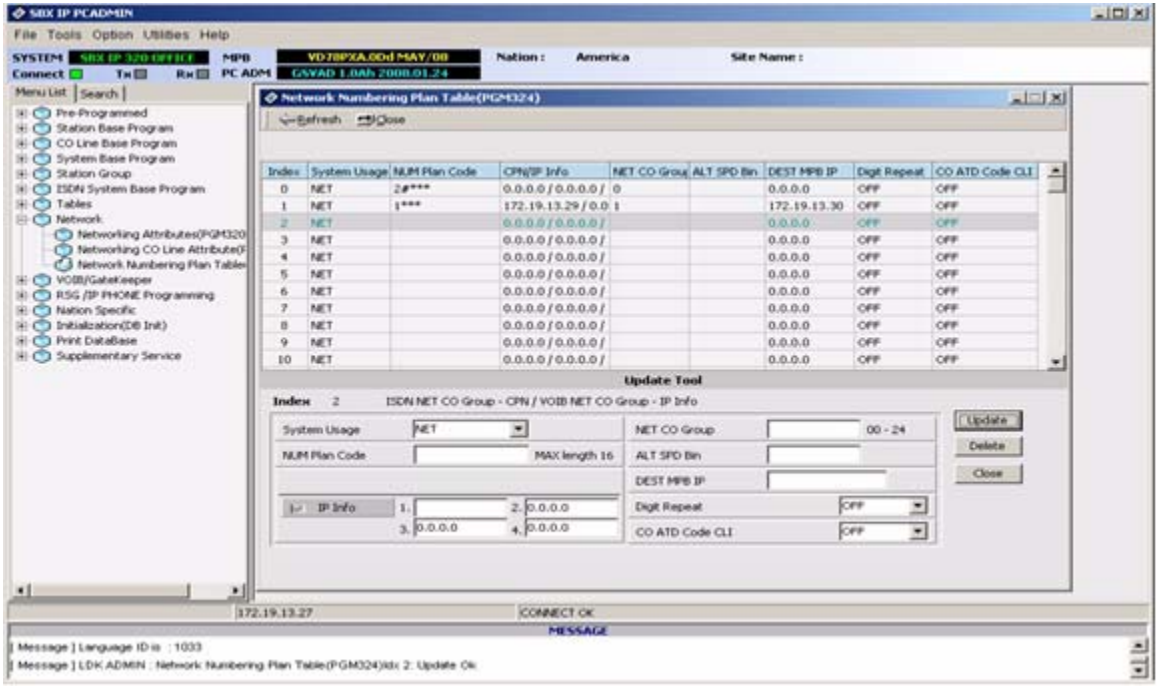


9. Program the VoIP Channels for Networking:
   Network > Network CO Line Attributes > Net CO Group 1, CO Line Type Net> VOIP Mode H323 > DTMF Mode Inband DTMF … Update.

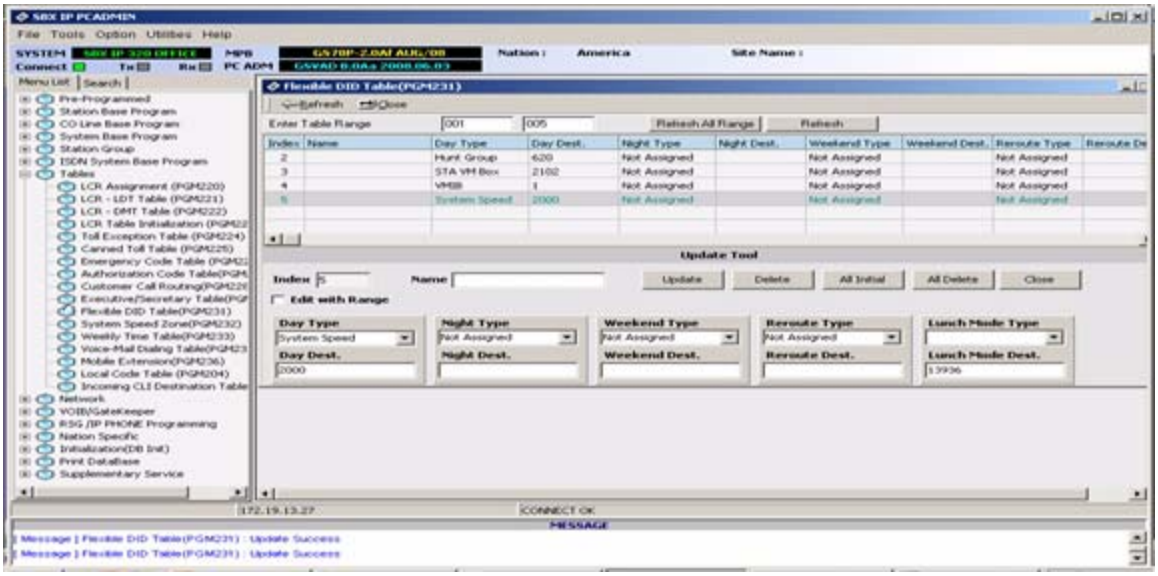


10. Program the Network Numbering Plan:

    Network > Network Numbering Plan Table > Bin 0 System Usage Net, Numbering Plan Code 2#*** , Net CO Group 0 (identifies this system), Bin 1 System Usage Net, Numbering Plan 1*** Net CO Group 1, MPB Address (System A) CPN IP (IP of the VOIP Card System A) … Update.


SBX IP PCADMIN
File Tools Option Utilities Help
Network Numbering Plan Table(PGM324)
Refresh
Close
Index System Usage NUM Plan Code CPN/IP Info NET CO Group ALT SPD Bin DEST MPB IP Digit Repeat CO ATD Code CLI
0 NET 2#*** 0.0.0.0 / 0.0.0.0 / 0 0.0.0.0 OFF OFF
1 NET 1*** 172.19.13.29 / 0.0 1 172.19.13.30 OFF OFF
2 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
3 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
4 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
5 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
6 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
7 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
8 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
9 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
10 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
Update Tool
Index 2 ISDN NET CO Group - CPN / VOIB NET CO Group - IP Info
System Usage NET
NUM Plan Code MAX length 16
IP Info
NET CO Group 00 - 24
ALT SPD Bin
DEST MPB IP
Digit Repeat OFF
CO ATD Code CLI OFF
Update
Delete
Close
172.19.13.27
CONNECT OK
MESSAGE

11. Program the Flexible DID Table to allow the Remote Site to Access Features:
    Tables > Flexible DID Table
    Program the Routes matching the last three Digits of the Codes Programmed on Site A for Feature Access., then program the Mode and Destination … Update.

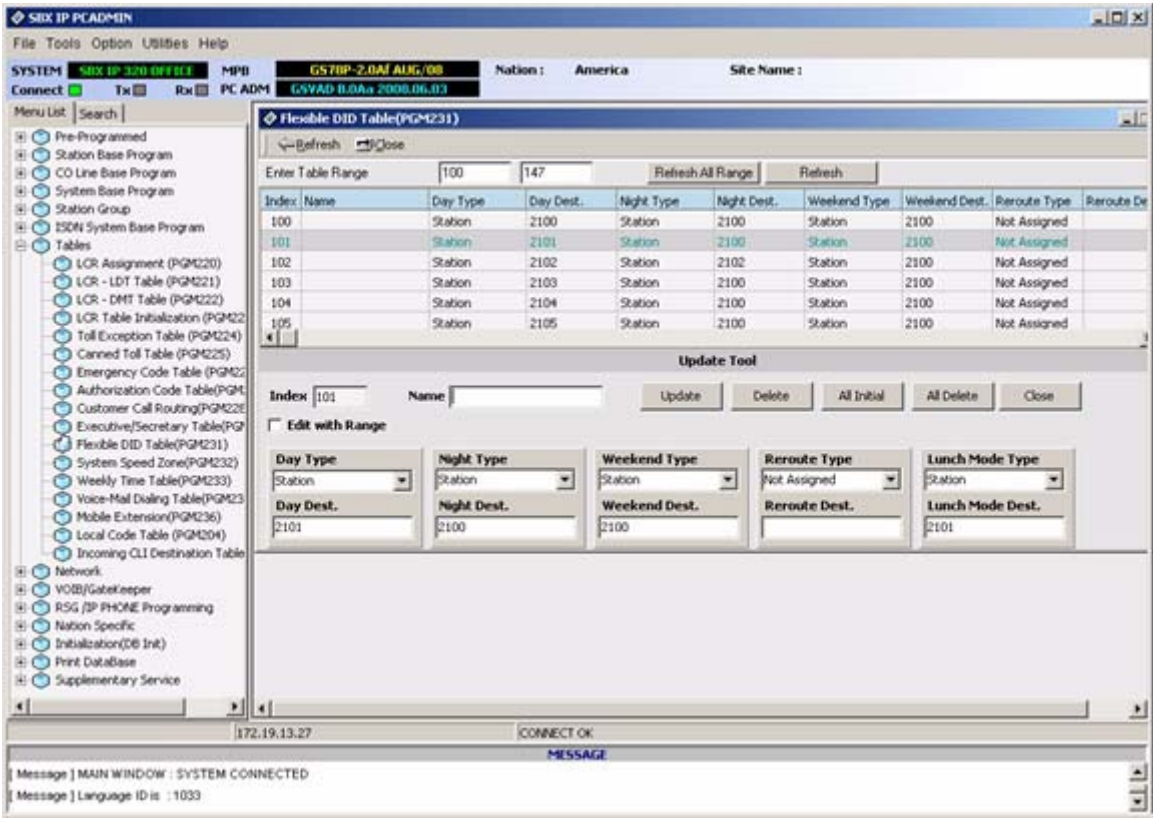


12. Program the Flexible DID Table for Station Ringing:

    (This will control the ringing destination of calls transferred across the Net via the Auto Attendant.)

    Program the Route that matches the last 3 digits of the Station Number. (i.e. Stations 2100 - 2147, select Routes 100 - 147), then select the Type > Destination … Update.

    NOTE: You may ring DID and Analog CO incoming calls directly across the Network. You cannot ring both sides of the Net at the same time.



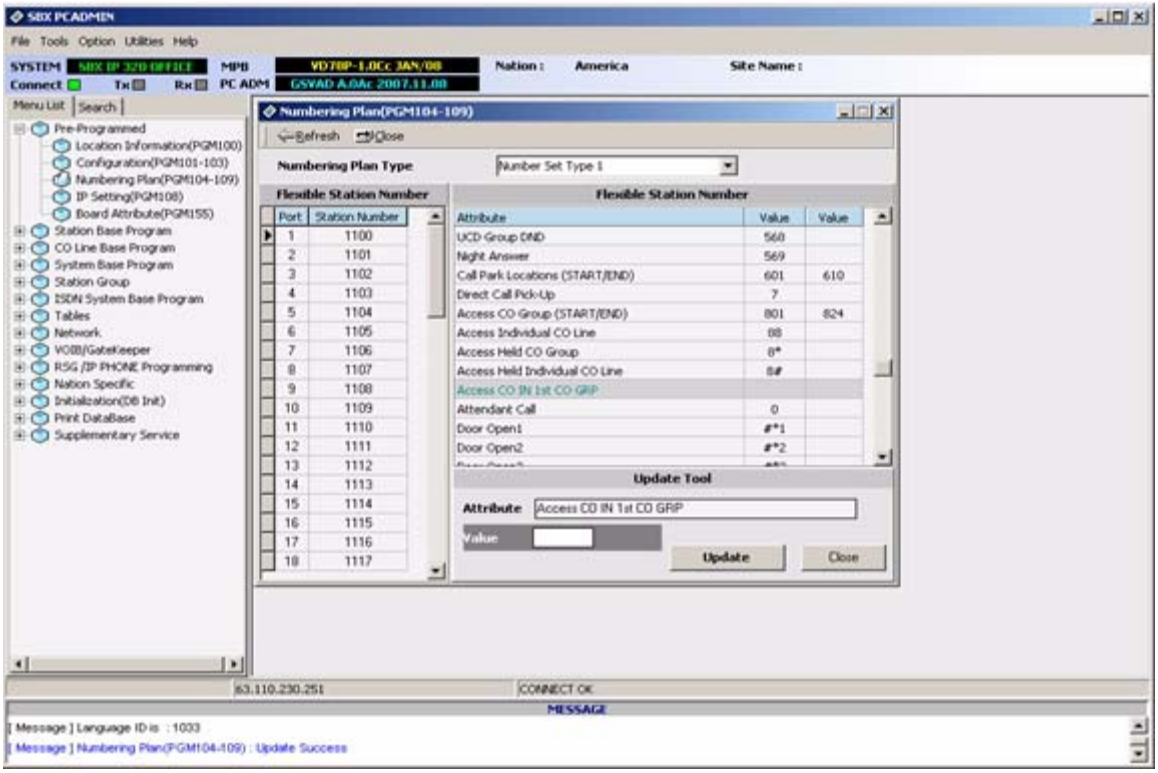
To Draw Dial tone Across the Net

It is possible to access and use the outgoing lines of a networked system. Program the following to draw Dial tone from System B.

System A Programming

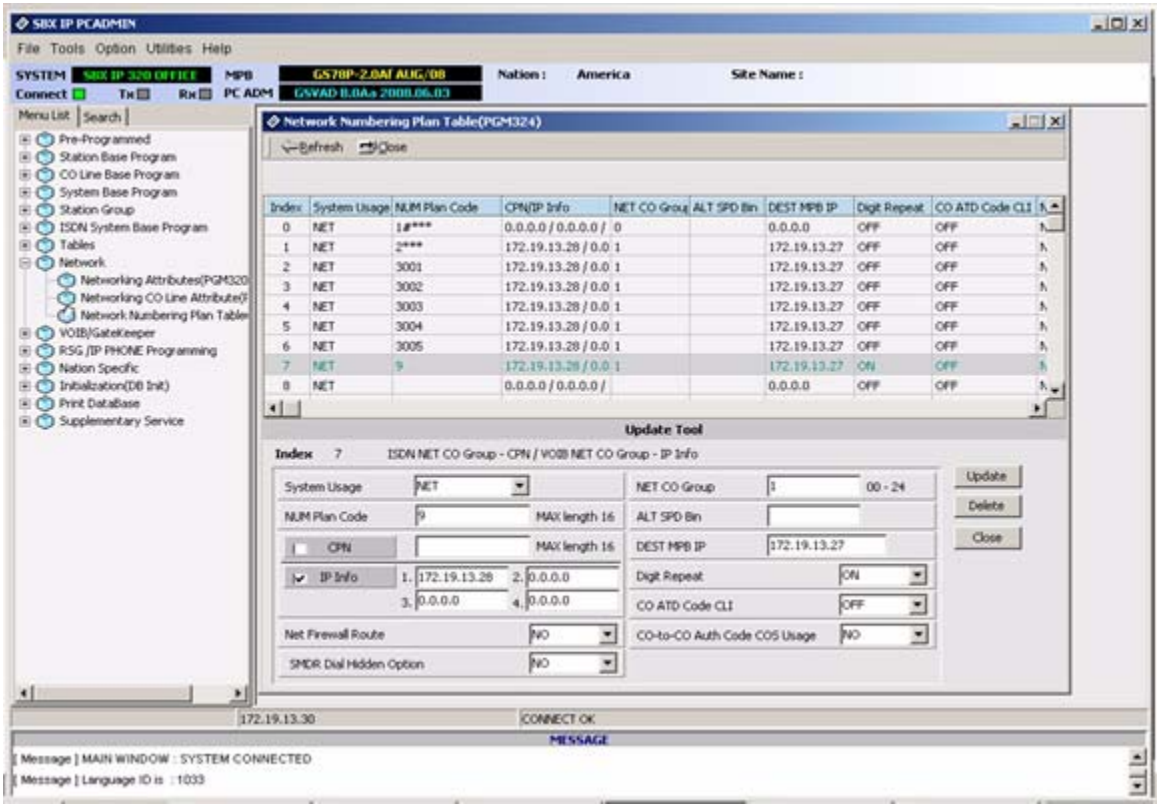
1. Remove Access CO Line 1st Group Code:
   Pre-programmed > Numbering Plan … Update.

   NOTE: Do Not Use a "digit assigned to features" (i.e. 6).



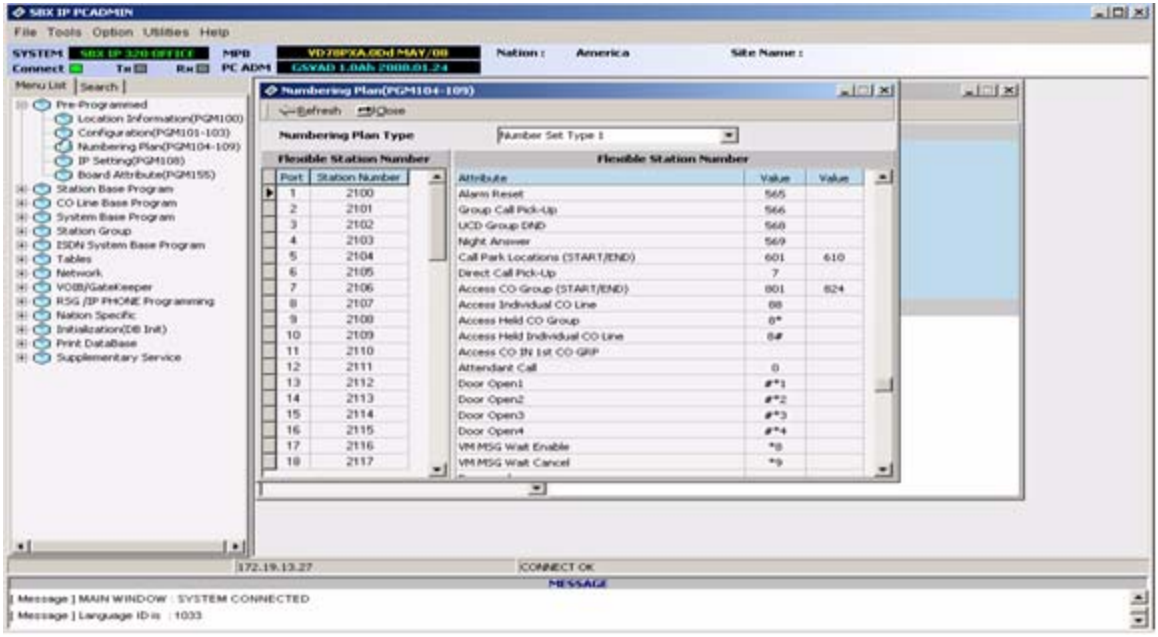
2. Add a Network Numbering Plan Table entry to direct outgoing call (dial 9) across the Net to System B and access the outgoing lines:

   Network>Network Numbering Plan>System Usage PSTN, Num Plan Code 9, Net CO Group 1, DEST MPB IP (System B), CPN IP (System B VOIB IP), Digit Repeat ON … Update.

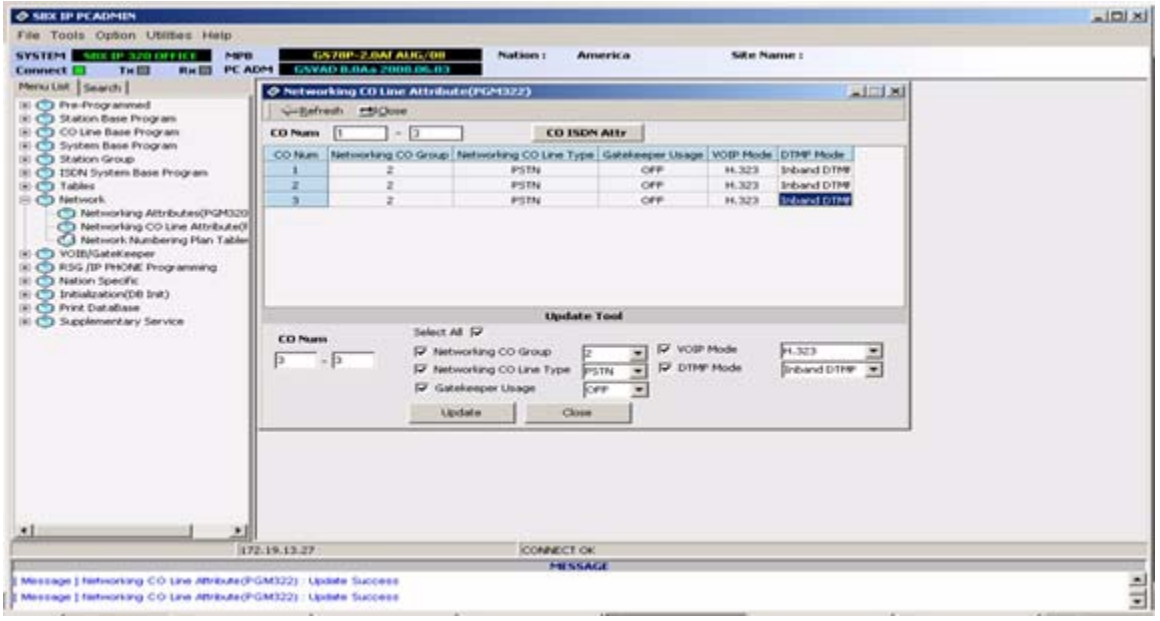

SBX IP PCADMIN
File Tools Option Utilities Help
SYSTEM SBX IP 320 OFFICE
MPB GS70P-2.0Af AUG/08
Nation : America
Site Name :
Connect Tx Rx PC ADM GSWAD 8.0Aa 2008.06.03
Menu List Search
Pre-Programmed
Station Base Program
CO Line Base Program
System Base Program
Station Group
ISDN System Base Program
Tables
Network
Networking Attributes(PGM320
Networking CO Line Attribute(P
Network Numbering Plan Table
VOIB/GateKeeper
RSG /IP PHONE Programming
Nation Specific
Initialization(DB Init)
Print DataBase
Supplementary Service
Network Numbering Plan Table(PGM324)
Refresh Close
Index System Usage NUM Plan Code CPN/IP Info NET CO Group ALT SPD Bin DEST MPB IP Digit Repeat CO ATD Code CLI
0 NET 1#*** 0.0.0.0 / 0.0.0.0 / 0 0.0.0.0 OFF OFF
1 NET 2*** 172.19.13.28 / 0.0 1 172.19.13.27 OFF OFF
2 NET 3001 172.19.13.28 / 0.0 1 172.19.13.27 OFF OFF
3 NET 3002 172.19.13.28 / 0.0 1 172.19.13.27 OFF OFF
4 NET 3003 172.19.13.28 / 0.0 1 172.19.13.27 OFF OFF
5 NET 3004 172.19.13.28 / 0.0 1 172.19.13.27 OFF OFF
6 NET 3005 172.19.13.28 / 0.0 1 172.19.13.27 OFF OFF
7 NET 9 172.19.13.28 / 0.0 1 172.19.13.27 ON OFF
8 NET 0.0.0.0 / 0.0.0.0 / 0.0.0.0 OFF OFF
Update Tool
Index 7 ISDN NET CO Group - CPN / VOIB NET CO Group - IP Info
System Usage NET
NUM Plan Code 9 MAX length 16
CPN MAX length 16
IP Info 1. 172.19.13.28 2. 0.0.0.0 3. 0.0.0.0 4. 0.0.0.0
Net Firewall Route NO
SMDR Dial Hidden Option NO
NET CO Group 1 00 - 24
ALT SPD Bin
DEST MPB IP 172.19.13.27
Digit Repeat ON
CO ATD Code CLI OFF
CO-to-CO Auth Code COS Usage NO
Update
Delete
Close
172.19.13.30
CONNECT OK
MESSAGE
[Message] MAIN WINDOW : SYSTEM CONNECTED
[Message] Language ID is : 1033

System B Programming

1. Remove the Access CO In 1st CO Group (9):
   Pre-programmed > Numbering Plan > Line 11 … Update.



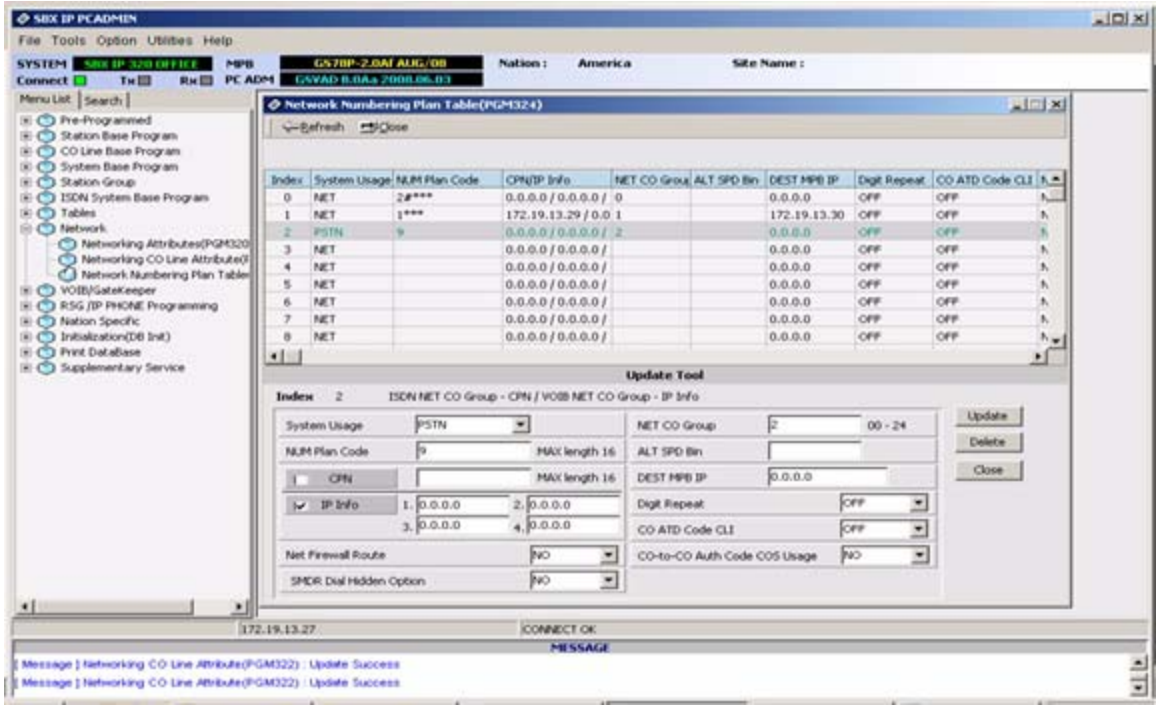
2. Program the Network PSTN Group:
   Network > Network CO Line Attributes (for outgoing CO Lines) > Net CO Group 2, Type PSTN … Update.


SBX IP PCADMIN
File Tools Option Utilities Help
Networking CO Line Attribute(PGM322)
Refresh
Close
CO Num
CO ISDN Attr
CO Num | Networking CO Group | Networking CO Line Type | Gatekeeper Usage | VOIP Mode | DTMF Mode
1 | 2 | PSTN | OFF | H.323 | Inband DTMF
2 | 2 | PSTN | OFF | H.323 | Inband DTMF
3 | 2 | PSTN | OFF | H.323 | Inband DTMF
Update Tool
CO Nums
Select All
Networking CO Group
Networking CO Line Type
Gatekeeper Usage
VOIP Mode
DTMF Mode
Update
Close
MESSAGE
Message] Networking CO Line Attribute(PGM322) Update Success
Message] Networking CO Line Attribute(PGM322) Update Success

3. Add a Network Table entry for the outgoing CO Lines:

   Network > Network Numbering Plan > Bin 2, System Usage PSTN, Net CO Group 2, Num Plan Code 9, Digit Repeat OFF … Update.

   NOTE: Dialing 9 for an outside line on either system will direct the call to one of the CO Lines in CO Network Group 2 on System B. You may program outgoing lines on System A to be access by System B by identifying the outgoing lines and making the associated Table entries. You will have to choose a different Dial Digit (e.g. 3) to access those lines.



Remote IP Phone Setup

Entering IP address information to the KSU database from a digital phone is performed differently from programming IP settings in an IP remote phone.

Digital Keyset on the KSU: Enter digits in groups of three, with no punctuation or decimal.

EXAMPLE: To program the address 192.168.1.3: dial 192168001003 > Save

IP Phone: Enter digits with an asterisk [*] as the decimal.

EXAMPLE: To program the address 192.168.1.10: dial 192*168*1*10 > Save.

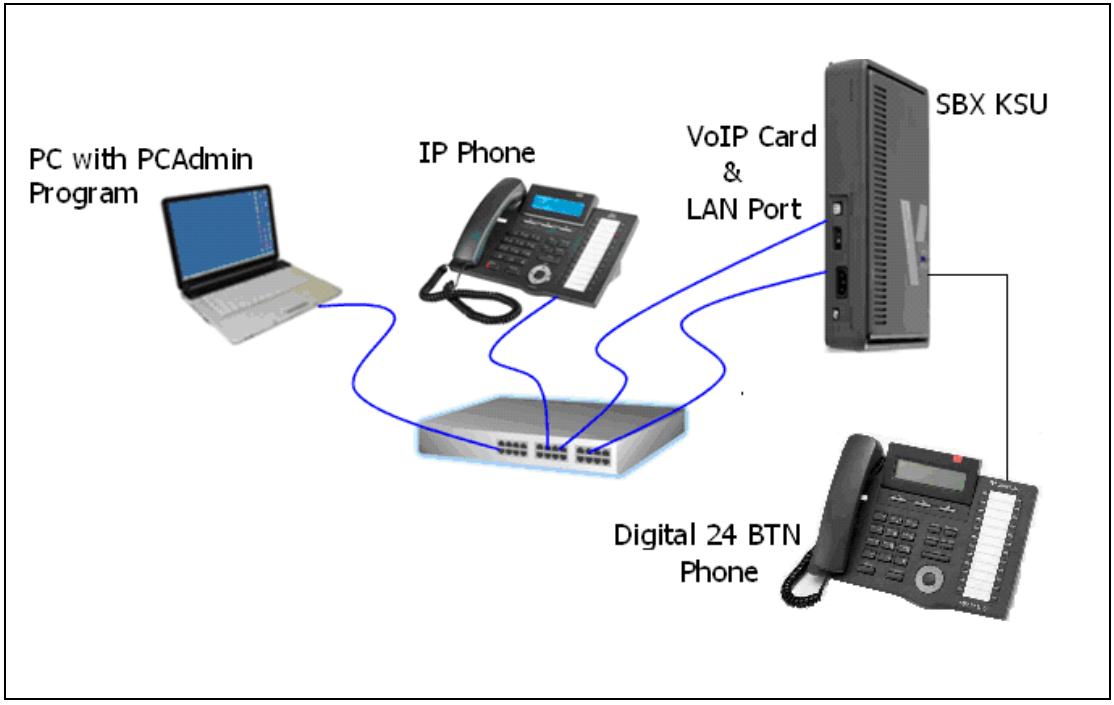
IP Addressing

To begin, you will need to obtain IP addresses from the network administrator for the location in which you are setting up the SBX IP system. Log them here for reference while programming the system.

	VOIP card (VOIB)	**KSU LAN port**	**IP Phone (may be DHCP)**	**Your PC (may be DHCP)**
IP Address				
Subnet Mask				
Default Gateway				

You will need a 24-button SBX digital telephone to set up the system.

For a typical test-bench or demonstration setup, you need four connections to a LAN switch, each via a straight-through CAT5E patch cord as shown above.



TEST BENCH SETUP

You may use the following IP addressing information to set up a closed demo of the IP phone.

NOTE: These addresses will not function in a wide-area network or the Internet, they are for testing and demonstration purposes only:

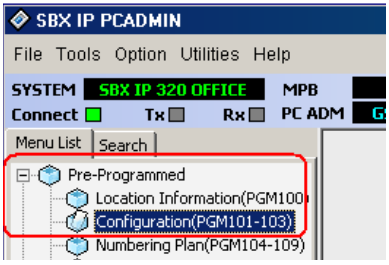
	VOIP card	KSU LAN port	IP Phone	Your PC
IP Address	192.168.1.4	192.168.1.3	192.168.1.5	192.168.1.2
Subnet Mask	255.255.255.0	255.255.255.0	255.255.255.0	255.255.255.0
Default Gateway	192.168.1.1	192.168.1.1	192.168.1.1	192.168.1.1

PREPARATION

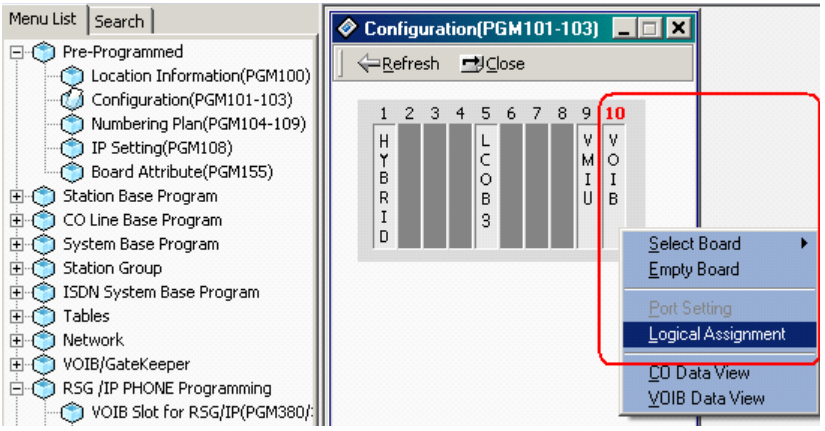
1. Before starting, verify that your VOIP card is installed into the system properly and that the card is recognized in the KSU database.
2. KSU DIP switches must be set to enable the system to retain programming changes.
3. Set your PC IP address, default gateway, and subnet mask as shown in the table on the previous page.
4. Set the KSU's IP addressing using PGM 108 when logged into KSU administration from the 24-button digital attendant station (station 100 by default). This assigns the IP address to the KSU's LAN port. The configuration for the VOIP card begins here.

Configuring the VoIP Card Using PCAdmin

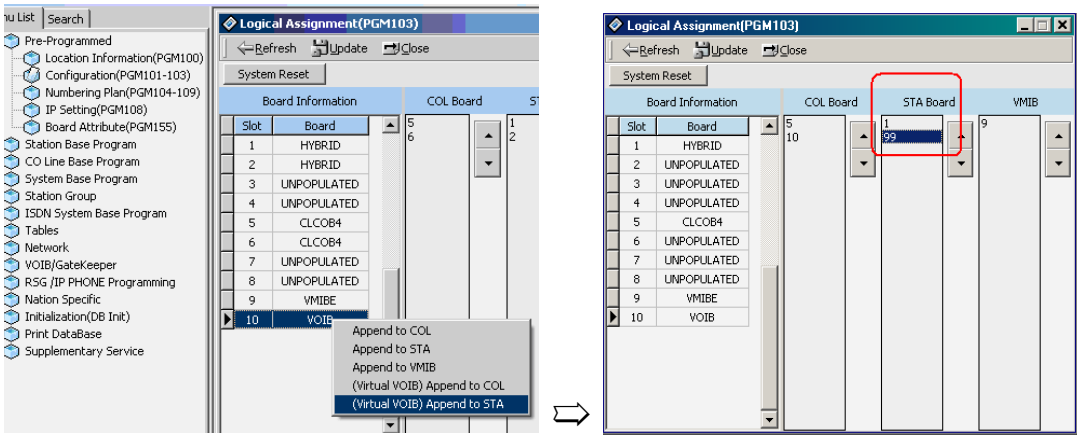
1. Double-click Pre-programmed > Configuration



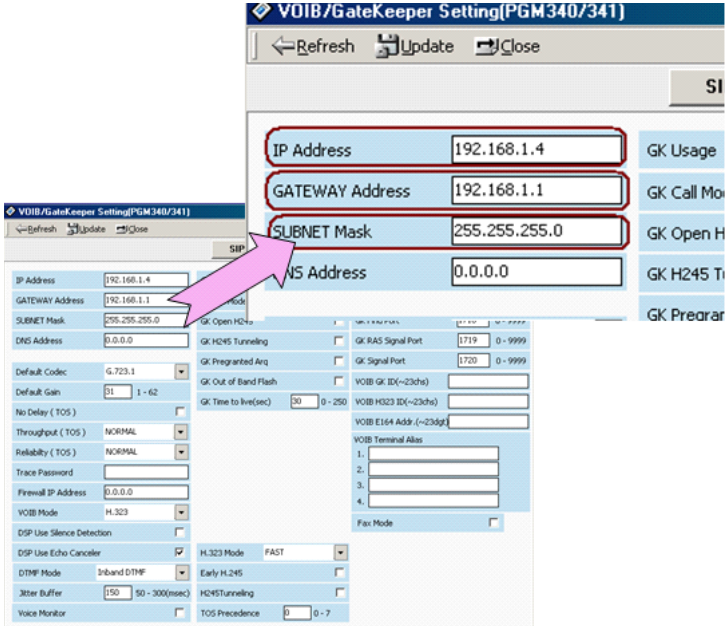
2. Right-click on the VoIB and select Logical Assignment.



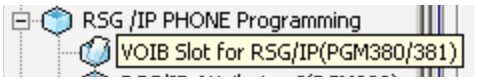
3. In Logical Assignments right click VoIB and Select (Virtual VoIB) => Append to Station. A notation of 99 will be entered in the STA Board field.



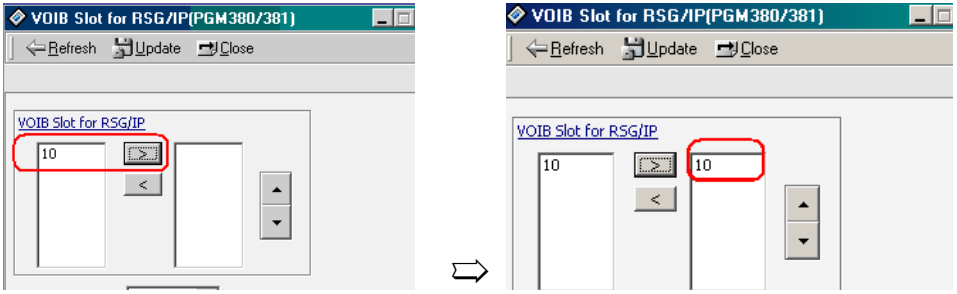
4. Update.
5. In VoIB Gateway > VoIB Gatekeeper Settings enter the IP Address, Default Gateway and Subnet Mask that you are assigning to the VOIP card per the worksheet on page 2 of this document. Update.



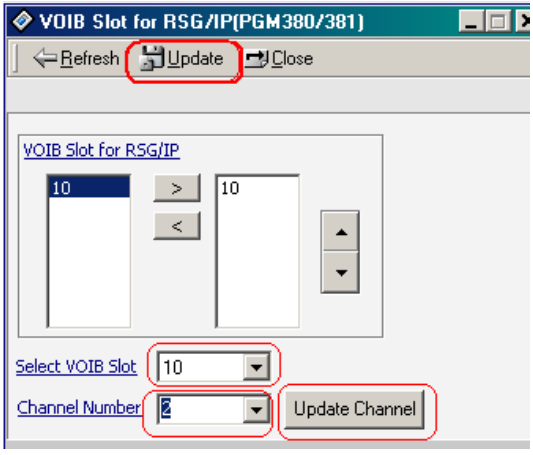
6. In RSG IP Programming, Double-click [VoIB Slot for RSG/IP]



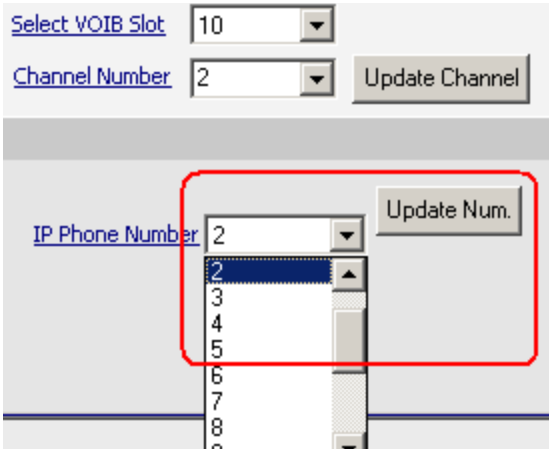
7. Select the VoIB card (10) and click the button with a > sign

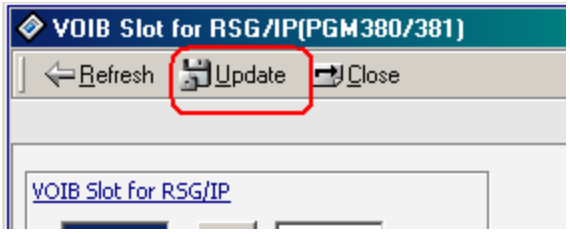


8. You will see the card slot on the right side. Click Update.
9. Select the card from the VoIB Slot dropdown. Select 2 for the number of channels to be used for IP Phones from the Channel Number dropdown. Click Update Channel.

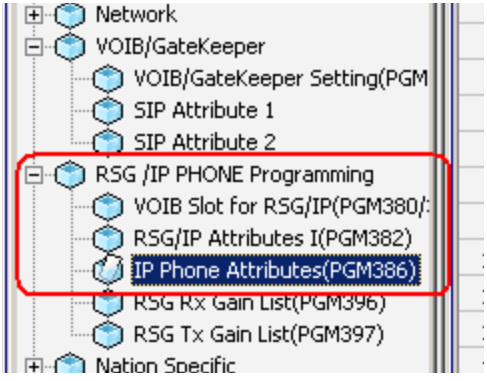


10. Select the 2 from the IP Phone Number dropdown and click Update Num. This tells the system to assign 2 IP stations. Update.

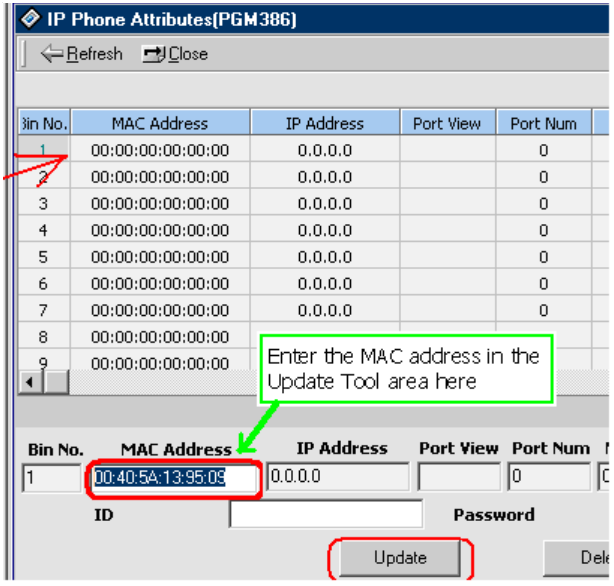




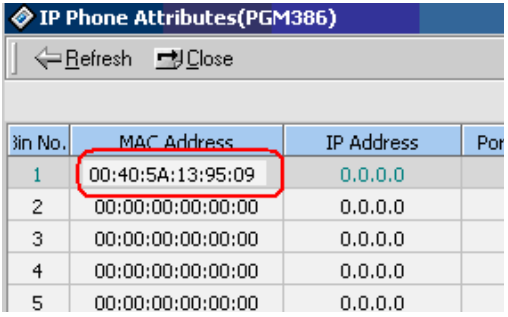
11. Reset the KSU.
12. Double-click RSG/IP Programming > IP Phone Attributes.



13. Double-click on bin #1 (row #1). Enter the MAC address which you will find labeled on the bottom of the IP phone and click Update.



Result:



NOTE: *You must enter the colon characters in the MAC address.*

You do not need to program the other data values in PGM 386 for IP7000 remote phones. The ID and Password values will be used when you are configuring a Nomad SP Soft Phone.

Configuring IP Phone Settings

To verify connectivity to the VoIP card, ping the VoIP card from where the phone is located.

Setting up the IP Phone will vary dependent on the network infrastructure, IP Address Schema and location of the System. You will need to have the following information to properly configure the IP Phone.

1 - The IP Address of the VoIP card.

2 - Is IP Address information supplied dynamically (DHCP) or statically?

3 - An IP Address and Subnet Mask for the IP Phone (either static or DHCP).

4 - The Default Gateway IP Address (either static or DHCP).

NOTE: Note: If IP Addresses are static you will need to obtain the correct IP Address, Subnet Mask and Default Gateway information from the IT Administrator.

Connect the IP Phone to the local network. It can be powered with an AC power adapter or a port on a POE (Power Over Ethernet) Switch. The power adaptor is part #6899-PS. When powered, the IP Phone will complete its boot sequence and attempt to connect to the VOIP Card. If the phone is unable to connect to the VOIP card the display will show:

NO RESPONSE FROM MFIM
SET [*****] - RESTART [#]

Press ***** to begin configuring the phone.

Use the Volume + and - to navigate the settings. Enter information as follows:

1. If you are prompted for a password : Dial 147*****
2. At MODE [R/L] ? (This is the Remote/Local Setting.) All IP Phones are considered remote to the SBX IP no matter where they are physically or logically. Set the mode to REMOTE. Press # until the display shows:

   MODE [R/L] ?
   [REMOTE] – CHANGE[#]

   Press Hold/Save to store the setting as REMOTE.

3. Press the volume + until DHCP ? appears. If IP Addressing is assigned via DHCP this should be enabled. If IP Addressing is Static this should be disabled. Press # until the display shows the correct state. Press Hold/Save to retain the entry.
4. Press the Volume + until MFIM IP ADDRESS (DOT:*) appears. This is the VOIB IP Address Field. MFIM = VOIB. Enter the IP Address on the dial pad. Press the * to enter a . (dot). For example, to enter 192.168.1.10, dial 192*168*1*10. Press Hold/Save to retain the entry.

   MFIM IP ADDRESS(DOT:*)
   xxx.xxx.xxx.xxx (The VOIB IP Address)

5. Press the Volume + until ROUTER IP ADDRESS(DOT:*) appears. This is the Default Gateway IP Address Field. If IP Addressing is being dynamically assigned you won't need to program this field. If IP Addressing is statically assigned enter the IP Address of the Default Gateway and press Hold/Save.

   ROUTER IP ADDRESS(DOT:*)
   xxx.xxx.xxx.xxx (Default Gateway IP Address)

6. Press the Volume + until PHONE NET MASK(DOT:*) appears. This is the Subnet Mask associated with the IP Address of the phone. If IP Addressing is being dynamically assigned you won't need to program this field. If IP Addressing is statically assigned enter the IP Address of the Default Gateway and press Hold/Save.

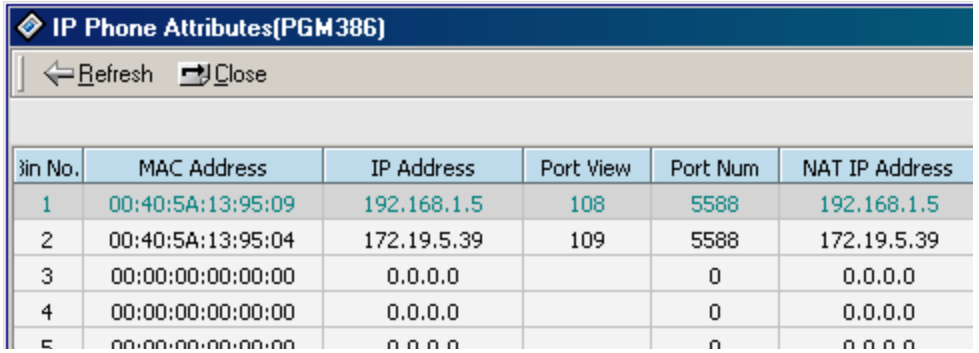
   PHONE NET MASK(DOT:*)
   xxx.xxx.xxx.xxx (Subnet Mask)

7. Press the Volume + until PHONE IP ADDRESS(DOT:*) appears. This is the station IP Address Field. If IP Addressing is being dynamically assigned you won't need to program this field. If IP Addressing is statically assigned enter the IP Address of the Station and press Hold/Save.

   PHONE IP ASSIGNED(DOT:*)
   xxx.xxx.xxx.xxx (Station IP Address)

When these fields have been completed, press the Speaker button to reboot the IP Phone. The phone will contact the VOIP card and register to the system. It will receive its station number assignment from the KSU.

In this example, the IP address and station number information appears after two IP phones have registered to the system:



Bin No.	MAC Address	IP Address	Port View	Port Num	NAT IP Address
1	00:40:5A:13:95:09	192.168.1.5	108	5588	192.168.1.5
2	00:40:5A:13:95:04	172.19.5.39	109	5588	172.19.5.39
3	00:00:00:00:00:00	0.0.0.0		0	0.0.0.0
4	00:00:00:00:00:00	0.0.0.0		0	0.0.0.0
5	00:00:00:00:00:00	0.0.0.0		0	0.0.0.0

Test the IP phone by dialing an extension number.

Programming VOIP card settings from a digital keyset

This is an alternative to PCAdmin programming shown above. Disregard this section if you have configured the IP phone using PCAdmin.

1. Enter KSU programming from the digital attendant phone
2. Press PGM
3. Dial 103 (Logical Slot Assign)
4. Press Flex Button 2 (STA)
5. What to enter will depend on what cards are installed. If there are two CHB308 cards installed the display will show 01 02 .. .. ..
   Dial 01 02 99 to assign station ports to the VOIB.
6. Save

Assign IP Address to the VoIB

1. Press PGM
2. Dial 340 (VoIB Attributes)
3. Press Flex Button 1 (IP ADDR)
4. Dial the IP Address (eg 192.168.1.10 Dial 192168010010)
5. Save
6. Press Flex Button 2 (Gateway ADDR) - Mandatory
7. Dial Default Gateway for VoIB (eg 192.168.1.1 Dial 192168001001)
8. Save
9. Press Flex Button 3 (Subnet Mask)
10. Dial Subnet Mask (eg 255.255.255.0 Dial 255255255000)
11. Save

VoIB Slot/Port Usage Assignment

1. Press PGM
2. Dial 380 (VoIB Slot Assignment)
3. Press Flex Button 1 (VoIB Slot)
4. Dial 10 (Slot Number to Program)
5. Save
6. Press Flex button 2 (RSG/IP channel Assign)
7. Dial 10 (Slot Number)
8. Dial 4 (or number of channels to reserve for IP Phones)
9. Save

VoIB IP Station Assignment

1. Press PGM
2. Dial 381 (RSG/IP No Assign)
3. Press Flex Button 2
4. Dial the number of IP Stations you wish to program (eg 04)
5. Save

>>> Reset the system and VoIP card.

Program IP Phone Attributes

The number of bins available to program will correspond to the number of IP phones programmed in PGM 381.

1. Press PGM
2. Dial 386 (IP Phone Attrib)
3. Dial the Bin Number (eg 01 This would be the first IP Station)
4. Press Flex Button 1
5. Dial the MAC Address of the IP Phone

   NOTE: *=A, #=B, NAV Left=C, NAV Right=D, NAV Up=E, NAV Down=F
6. Save

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